BRIDGES *to* PRACTICE

A Research-based Guide for Literacy Practitioners Serving Adults with Learning Disabilities

A Project of the National Institute for Literacy

GUIDEBOOK 4
The Teaching/Learning Process

NATIONAL ALL LD CENTER

A Collaboration Between

AED

The Academy for Educational Development
and
The University of Kansas Institute for Research in Learning Disabilities

Bridges to Practice consists of five guidebooks designed for use by literacy programs to enhance the quality of services provided to adults with learning disabilities. Each guidebook is designed to answer specific questions that literacy program staff might have, such as legal issues, screening for learning disabilities, selection of curriculum options, and the use of effective instructional methods.

Bridges to Practice

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Guidebook 1

Preparing to Serve Adults with Learning Disabilities

Guidebook 2

The Assessment Process

Guidebook 3

The Planning Process

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The Teaching/Learning Process

- The Challenge of Teaching Adults with Learning Disabilities
- Creating an Appropriate Learning Environment
- Making Instructional Adaptations and Accommodations
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Guidebook 5

Creating Professional Development Opportunities

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The National Adult Literacy and Learning Disabilities Center
Washington, DC · 1999

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Guidebook 4

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The National ALLD Center, funded by the National Institute for Literacy, is a collaboration between the Academy for Educational Development and the University of Kansas Institute for Research in Learning Disabilities. The Center's mission is to promote awareness about the relationship between adult literacy and learning disabilities. Through its national information exchange network and technical assistance training, the National ALLD Center helps literacy practitioners, policymakers, and researchers better meet the needs of adults with learning disabilities. We encourage your inquiries and will either directly provide you with information or refer you to an appropriate resource.

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Academy for Educational Development
Washington, D.C. 20009
January 1999

NATIONAL INSTITUTE FOR LITERACY

Fall, 1998

Dear Colleagues:

The National Institute for Literacy (NIFL) has a small budget and a huge mission: to assure that all American adults who need to improve their literacy skills have access to services of real quality and effectiveness.

One of the greatest challenges to this mission is the issue of learning disabilities (LD) – our field's historic lack of knowledge about these complex obstacles to learning, and our struggle to help adults with LD gain the skills they need to lead productive, fulfilling lives.

Educators have known for years that learning disabilities are among the major problems faced by adult literacy students and by the programs that serve them. But today the need for solutions is especially urgent. On the eve of the 21st century, when literacy skills are more important than ever before to the success of individuals and our nation, state and local programs are under enormous pressure to show that their services make a difference to all their students. We must learn how to do a better job of serving adults with learning disabilities.

BRIDGES TO PRACTICE is NIFL's major contribution to that goal. BRIDGES is the centerpiece product of our National Adult Literacy and Learning Disabilities Center. It is the culmination of a five-year investment in developing useful, concrete tools related to learning disabilities in adults for literacy and other human resource practitioners. We are convinced that BRIDGES and its accompanying training and technical support will meet critical professional development needs that have never been met in such a comprehensive way.

The publication of BRIDGES is not the end of NIFL's commitment in the area of literacy and learning disabilities. We hope it will be the beginning of an increasingly collaborative process with all of you to find better and better ways of serving this significant population of America's adults.

Sincerely,

Andy Hartman Susan Green Glenn Young

Andrew Hartman	Susan Green	Glenn Young
Director	Project Officer	Learning Disabilities Specialist

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Preface

Welcome to *Bridges to Practice*. You are about to embark on a journey designed to help literacy programs enhance the services they provide for adults with learning disabilities. The development of *Bridges to Practice* is centered around the vision of the National Adult Literacy and Learning Disabilities Center (National ALLD Center). This vision consists of the following beliefs:

- Adults with learning disabilities have specific and unique educational service needs.
- Literacy programs can and should meet the needs of adults with learning disabilities.
- By focusing on research-based information, the National ALLD Center can help literacy programs better meet the needs of adults with learning disabilities.

Bridges to Practice is organized around five guidebooks designed to document and reflect "best practices" in working with persons with learning disabilities. What distinguishes these guidebooks from similar products is that the content is based on research. The purpose of these guidebooks is to influence the decision-making process of literacy practitioners in evaluating and selecting screening tools, curricular materials, and instructional strategies that are effective for adults with learning disabilities. Ultimately, by making changes in the provision of services for adults with learning disabilities, literacy programs can help countless adults reach their potential and lead more fulfilling and self-sufficient lives.

By the end of the *Bridges to Practice* training, you will have:

- a broader awareness of learning disabilities and their impact on the provision of literacy services;
- a repertoire of skills and practical tools for tapping the creativity and experience of those you work with;
- a vision of the changes you would like your program to initiate in providing services which are more responsive to the needs of persons with learning disabilities; and
- an action plan for how you intend to achieve those changes.

To derive maximum benefit from these guidebooks, literacy program leaders are encouraged to participate in the companion training/professional development program developed by the National ALLD Center. When used in conjunction with this training and the accompanying video, *Bridges to Systemic Reform*, these guidebooks can provide the stimulus for literacy programs to begin to address overall system change and, thereby, to enhance the quality of services provided to adults with learning disabilities.

For more information on the training, contact the National ALLD Center at (202) 884-8185 or (800) 953-ALLD [2553].

Mary Ann Corley, Ph.D.
Director, National ALLD Center

Foreword

Learning disabilities is an umbrella term that describes a wide variety of disorders, including disorders in one or more of the basic psychological processes involved in understanding or using spoken or written language. Adults who have difficulties with listening, thinking, speaking, reading, or writing are likely to experience problems that significantly affect their academic achievement and their lives.

Varying estimates of the number of American adults with learning disabilities range from 3 to 15 percent of the general population. An even greater incidence of learning disabilities is likely to be found among the population of adults with low-level literacy skills. Research has yet to determine just what that proportion is; estimates range from 30 to 80 percent.

Bridges to Practice: A Research-based Guide for Literacy Practitioners Serving Adults with Learning Disabilities was developed through funding from the National Institute for Literacy (NIFL), which was created by the National Literacy Act of 1991. The NIFL's mission is to maximize the effectiveness of local literacy services nationwide. One of the goals of the NIFL is to enhance the capacity of literacy service providers to identify, teach, and support adults with learning disabilities.

In 1993, the NIFL provided funding to the Academy for Educational Development (AED) to establish the National Adult Literacy and Learning Disabilities Center (National ALLD Center) in collaboration with the University of Kansas Institute for Research in Learning

Disabilities (KU-IRLD). Together, the staff at AED and the KU-IRLD developed a service, research, and development agenda designed to assist literacy practitioners in enhancing services to adults with learning disabilities. This agenda was developed in recognition of:

- the link between low-level literacy in adults and the apparent prevalence of learning disabilities;
- the high student attrition rate nationwide in adult literacy programs;
- the paucity of research studies on adult literacy students with learning disabilities; and
- the need to improve the outcomes of adult literacy programs.

The National ALLD Center developed the *Bridges to Practice* series for adult literacy program supervisors and professional development specialists. The goal of *Bridges to Practice* is to increase awareness among practitioners about learning disabilities and to help program leaders address the changes they might initiate to make their programs more responsive to the needs of adults with learning disabilities.

By setting forth guidelines for best practices and by stimulating discussions among program staff, these guidebooks can be the catalyst that causes some literacy programs to rethink and restructure their delivery systems to be more effective in serving adults with learning disabilities. Programs that are responsive to the needs of adult learners ultimately will assist greater numbers of students in achieving their goals.

Development of the Guidebooks

Research efforts in the fields of literacy, adult education, and learning disabilities are just beginning to yield clear directions for practice. Furthermore, what is known from research on learning disabilities has found its way only sporadically into instructional practice. It has been estimated that less than 10 percent of educational materials and methods currently used in instructional settings has been validated through any type of research (Carnine, 1995). To address this dilemma, the team at the National ALLD Center developed a three-phase research and development plan.

Phase 1: Gather Information from the Field

During the first phase of research and development, the National ALLD Center staff organized focus groups, sent out questionnaires, surveyed

resource centers, and evaluated current screening practices and instructional materials. Through this research, the staff

- identified the beliefs, issues, and values of practitioners in the fields of literacy and learning disabilities;
- identified and validated standards for developing, evaluating, and selecting practices related to screening and instructional materials for serving adults with learning disabilities; and
- identified current practices related to serving adults with learning disabilities.

The last step in this phase was to develop and field-test procedures related to teaching literacy providers to apply the standards to screening practices and instructional materials.

Phase 2: Integrate Research and Write Guidebooks

During the second phase of research and development, the National ALLD Center staff integrated the knowledge they had gathered during the first phase and used this information as a basis for the first four *Bridges to Practice* guidebooks. The staff also developed training for using the program and field-tested the guidebooks to determine how literacy service providers could use the information to improve services for adults with learning disabilities.

Phase 3: Review and Refine Guidebooks

After the first four guidebooks were developed, the National ALLD Center staff used field-test results and reviews of external evaluators to revise the guidebooks. They also collaborated with the four NIFL-funded Learning Disabilities Training and Dissemination (LDTD) hubs and developed the professional development guidebook (*Guidebook 5*) to enhance the dissemination of information contained within the *Bridges to Practice* series.

Because of ongoing research and development in the fields of adult literacy and learning disabilities, additional information will be continuously added to these guidebooks so that they reflect the most current knowledge concerning adults with learning disabilities.

Ensuring Success

The fields of adult literacy and learning disabilities represent many audiences and interest groups. The *Bridges to Practice* guidebooks provide

information about learning disabilities and their impact on literacy programs. However, these guidebooks cannot compensate for the development of specialists in learning disabilities and professional training. Ideally, literacy services for adults with learning disabilities should be organized and delivered by, or under the direct guidance of, a practitioner who is a "master" in providing instruction to those who struggle with learning and learning disabilities.

Terminology Used in the Guidebooks

For consistency throughout these guidebooks, the term "practitioner" is used to describe persons who provide direct services to adults with learning disabilities. Practitioners can be tutors, teachers, program leaders, or volunteers.

These guidebooks specifically focus on adults who are either diagnosed as, or suspected of, having learning disabilities. On occasion, particularly for the sake of simplicity within tables and charts, the term "learner" is used to refer to adults who have, or may have, learning disabilities.

Because of the limited amount of research on programs and practices available for adults with learning disabilities, many of the practices referenced in these guidebooks represent best practices across the field of learning disabilities, and require translation for use in the adult community. Therefore, the terms "person with learning disabilities" or "individual with learning disabilities" imply that learning disabilities are a lifelong condition.

In some instances, again for simplicity, the abbreviation LD is used for learning disabilities, as in the term "LD-appropriate literacy services." When the term "accommodation" is used to describe the responsibilities of adult literacy programs, it refers to changes that are legally required to allow the adult who has been diagnosed with a learning disability to access and profit from the basic or essential services provided by a program. The term "adaptation" refers to the routine changes that a teacher makes during instruction to increase student learning. Adaptations are usually not legally required and may be thought of as good teaching practices responsive to the heterogeneity within any group of learners.

Finally, the term *Bridges* is frequently used to refer to the entire set of guidebooks in *Bridges to Practice*, and the term "guidebook" is used to refer to each of the five guidebooks included in the series.

Seizing the Opportunity!

A Call to Action

Adults come to literacy programs for a variety of reasons: they want to get a job or a better job; they want to help their children with their schoolwork; or they want to be able to read a newspaper or write a letter. In essence, they want to improve their lives. Many of these adults may only consider approaching a literacy program for help when faced with serious personal embarrassment, struggles with friends and family, or the imminent loss of employment. It takes great courage to face these fears and take those first steps to walk through the doors of a literacy program.

Literacy programs may view the provision of services for adults with learning disabilities as a problem or an impossible challenge, especially when faced with limited financial resources, limited or poorly designed professional development experiences, and a shortage of personnel. However, there is no shortage of caring or commitment on the part of literacy practitioners. They know first-hand the joys and rewards felt by learners who have met their goals. Most literacy programs and practitioners will welcome and seize the opportunity to improve services for learners, provided they can identify the necessary resources and tools.

One challenge for literacy programs and practitioners is to change their views about learning disabilities and the impact of learning disabilities on the provision of services to learners. Literacy programs cannot overlook the fact that their learners' real-life responsibilities and obligations, combined with a real history of failure, embarrassment, and fear, shape a set of conditions that require a significant amount of staff planning and creativity. They must thoroughly understand the circumstances which shape their actions to develop high-impact programs.

Shaping an Agenda

In 1994, the National Joint Committee on Learning Disabilities (NJCLD), an interdisciplinary consortia of organizations formed to review issues surrounding learning disabilities for educational and governmental agencies, identified the following eight issues that should be used to shape decisions about programming for adults with learning disabilities (National Joint Committee on Learning Disabilities, 1994):

1. Learning disabilities are both persistent and pervasive throughout an individual's life. The manifestations of the learning disability can be expected to change throughout the life span of the individual.

2. At present there is a paucity of appropriate diagnostic procedures for assessing and determining the status and needs of adults with learning disabilities. This situation has resulted in the misuse and misinterpretation of tests that have been designed for and standardized on younger people.
3. Older adolescents and adults with learning disabilities frequently are denied access to appropriate academic instruction, pre-vocational preparation, and career counseling necessary for the development of adult abilities and skills.
4. Few professionals have been adequately prepared to work with adults who demonstrate learning disabilities.
5. Employers frequently do not have the awareness of, or sensitivity to, the needs of adults with learning disabilities. Corporate as well as public and private agencies have been unaware of the issue, and therefore have failed to accept their responsibility to develop and implement programs for adults with learning disabilities.
6. Adults with learning disabilities may experience personal, social, and emotional difficulties that may affect their adaptation to life tasks. These difficulties may be an integral aspect of the learning disability, or may have resulted from past experiences with others unable or unwilling to accept, understand, or cope with the person's disabilities.
7. Advocacy efforts on behalf of adults with learning disabilities currently are inadequate.
8. Federal, state, and private funding agencies concerned with learning disabilities have not supported program development initiatives for adults with learning disabilities.

In addition to these concerns identified by the NJCLD, adults with learning disabilities are frequently viewed as not having *real* disabilities and, as a result, are often not given access to information about their civil rights and about how to become their own advocates for these rights. Consequently, they are denied the information they need to bring about change for themselves and to take control of their lives.

An Agenda for Action

Improving the overall quality of how our society responds to adults with learning disabilities is a global issue which needs to be addressed by society in general. There are, however, unique responsibilities within the field

of adult literacy. The field must acknowledge that it has a significant history of inaction and that there has been an absence of information about effective services for adults with learning disabilities. With this acknowledgment, program leaders can make a commitment to take the first step in carrying out a new agenda for radically changing current practices in literacy programs. This opportunity to change the lives of millions of adults cannot be missed.

Every literacy program in America can embark on an aggressive campaign to develop high-quality, high-impact literacy services for adults with learning disabilities. To do this, every literacy program should make the following commitments:

- **Understand, use, and demand more research-based practices.** When research is not available to guide practice, literacy programs should demand that federal or state funding be provided to develop practice, and thoroughly test the practices on adults with learning disabilities.
- **Believe that they can improve all literacy services by improving services for adults with learning disabilities.** Practices for serving adults with learning disabilities are based on the idea of providing explicit and structured instruction while honoring and building on the perspectives, knowledge, skills, and experiences of the individual. The process of understanding and then trying to achieve this balance is at the very heart of offering LD-appropriate literacy services.
- **View all those in literacy programs as having a high probability for having learning disabilities.** Not everyone enrolled in literacy programs has learning disabilities. However, most adults with low literacy skills are likely to have learning disabilities. Many of these individuals will not seek formal diagnostic testing to confirm a learning disability. Instruction that is appropriate to learning disabilities—whether or not a learning disability is confirmed—should be the rule rather than the exception in literacy programs. In addition, literacy programs should continuously consider, at all phases of an adult's participation in a program, whether confirmation of a *suspected* learning disability could provide civil rights protections that might have a positive impact on the adult's success in life.
- **Make the improvement of LD-appropriate literacy programs a top priority.** To create changes that are required, programs need to embrace policies and procedures that will ensure high-quality services for adults with learning disabilities. These policies include

spending more time learning about learning disabilities, assessing learning problems, developing effective instructional plans, using high-quality instructional methods, and developing necessary community linkages.

- **Enlist private and public organizations to help shape a new system of thinking about civil rights and develop policies and services related to learning disabilities.** Changing current practice in literacy programs is only part of the solution. If literacy programs try to do this alone, their efforts will always be inhibited by resources, time, and the problems associated with transferring new knowledge and skills into the real world. They must develop links to the community that will ensure adequate resources, support, and follow-up. By making these connections, literacy programs can ensure that adults with learning disabilities can continue to be successful, not only in literacy programs, but in life in general.

How practitioners think and interact with adults with learning disabilities affects the adults in many ways, such as their ability to learn or their self-perception, hopes, fears, and accomplishments. Adults with learning disabilities sometimes have few allies to stand by them and champion their cause. Literacy practitioners are among the few professionals that adults with learning disabilities can turn to for help fighting the battles that they face every day of their lives.

Although their resources are few and their numbers small, literacy practitioners possess the greatest asset of all—relentless courage. They have nothing to lose and everything to gain by accepting this call to action to help improve the lives of millions of adults with learning disabilities.

Overview of *Guidebook 4: The Teaching/Learning Process*

This is the fourth of five guidebooks in the *Bridges to Practice* series. The purpose of the series is to help literacy programs and practitioners (teachers, tutors, volunteers, and program leaders) develop or improve services to adults with learning disabilities.

Guidebook 4 is divided into seven sections. The information included in these sections will help program staff to answer the following questions about teaching/learning:

- How is teaching adults with learning disabilities different from teaching adults in general?
- How can literacy program staff ensure that instruction increases the success of adults with learning disabilities?
- What is an appropriate learning environment for adults with learning disabilities?
- How can literacy programs create an appropriate learning environment?
- How do instructional accommodations and adaptations differ, and when is each appropriate for use?
- How can literacy program staff ensure that accommodations and instructional adaptations are appropriately selected and used to increase the success of adults with learning disabilities?
- What makes instruction LD-appropriate?
- What are some principles of LD-appropriate instruction?
- What are the characteristics of strategic instruction?
- What are the characteristics of collaborative tutoring?

Section 1: The Challenge of Teaching Adults with Learning Disabilities

This section discusses how instruction for adults with learning disabilities can be both unique and powerful enough for use with other learners. Structured and explicit instruction can be used with many adults with limited literacy skills.

Section 2: Creating an Appropriate Learning Environment

The learning environment must support the learner and promote independence. This section discusses requirements for creating such an environment.

Section 3: Making Instructional Adaptations and Accommodations

This section discusses the instructional adaptations and legal accommo-

dations that need to be part of any LD-appropriate literacy program. Practitioners must understand how and when to use such techniques and be aware of how these techniques relate to addressing learning disabilities among adults.

Section 4: Two Frameworks of LD-Appropriate Instruction

This section presents two research-based models of instruction: direct instruction and information processing.

Section 5: Collaborative Teaching/Tutoring

This section shows how principles of LD-appropriate instruction can be implemented collaboratively between the teacher or tutor and the learner. Two examples of collaborative teaching/tutoring sessions are provided.

Section 6: Summary: Characteristics of LD-Appropriate Instruction

Successful instruction for adults with learning disabilities involves practitioners' developing and employing techniques that will lead the learner to greater success in life. Twelve characteristics of effective instruction are discussed in this section.

Section 7: Systems and Program Change

This section provides information for targeting areas for program development. These plans can be used for planning professional development activities and for developing appropriate policies, procedures, and practices to enhance services for adults with learning disabilities.

Bibliography

These suggested readings were selected by special education and adult education professionals during the field-test and review process of developing *Bridges to Practice.*

Appendix A: Characteristics of the Strategies Instructional Model

This section presents a model of instruction that has been used successfully with adolescents and young adults with learning disabilities and can be used by literacy practitioners to increase the success of adults with learning disabilities. Although this model requires experience and training, it provides examples of how to incorporate strategic instruction into the teaching of content.

Appendix B: The Role of Phonological Awareness in Learning to Read

This section discusses the importance of phonological awareness in the learning process and describes how deficits in phonological awar7eness can contribute to reading disabilities. The stages of teaching phonemic awareness are summarized.

The Challenge of Teaching Adults with Learning Disabilities

Many educators believe that the best practices for teaching adults with learning disabilities may also be the best practices for teaching all adults with limited literacy skills. Although research has not yet investigated this claim in all areas of teaching, literacy providers may find the methods discussed in this guidebook helpful for use with a variety of adults who need more intensive and explicit instruction. Instruction that is effective for an adult with learning disabilities is sensitive to the way the adult processes information or thinks about learning and performance.

Many adult learners may have learning disabilities that have not been diagnosed, and they may be struggling to learn. By enhancing teaching practices to be more responsive to the needs of adults with learning disabilities, literacy programs can improve instructional outcomes for all learners. Using principles of LD-appropriate instruction, practitioners can move beyond simple observation of performance to an exploration and understanding of the cognitive and metacognitive strategies that their students use to learn and perform tasks. This shift in thinking about instruction is an opportunity for literacy providers to significantly improve teaching of all adults with literacy needs.

To address the instructional challenge presented by adults with learning disabilities, literacy programs need to develop and embrace systematic teaching behaviors that focus on how adults learn and approach tasks. In

the absence of a systematic approach to instruction, practitioners might be tempted to use "trial-and-error" tactics to teach adults.

However, research in education and learning disabilities indicates that a systematic approach to instruction appears to be more powerful than trial-and-error teaching. (For resources on research, see selected readings at the end of this guidebook.) There is little research that supports the effectiveness of gearing instruction towards specific learning styles or basing it on the learner's auditory or visual strengths or weaknesses. Activities commonly used for adults with learning disabilities, such as the use of multisensory techniques, audiotapings of text, and graphic organizers, have limited impact when implemented outside of a broader framework of instruction and not used as part of a comprehensive approach.

Research in the field of learning disabilities supports instruction that is direct, intensive, and systematic, as well as an instructional approach that is sensitive to the ways that learners process information.

This guidebook presents instructional approaches that are supported by research on children and young adults with learning disabilities. Although this research has yet to be replicated on adults in literacy programs, it represents the most current information available on instructional interventions for persons with learning disabilities. Therefore, it is reasonable for literacy programs to base their practices on that which research supports as effective for persons with learning disabilities. In time, with increased funding and support for research on adults with learning disabilities, the knowledge base on the best practices for adults with learning disabilities will be enhanced. The *Bridges* guidebooks are only a beginning.

There are several key elements in the teaching/learning process that contribute to the success of adults with learning disabilities. These include:

- the practitioner's thorough understanding of the content of the various curricular options that have been targeted during goal-setting activities (refer to *Guidebook 3: The Planning Process*) so that he or she can make instructional sequences and modifications without compromising the integrity of the content;
- the creation of an instructional environment that strategically promotes learner independence;
- the provision of instructional adaptations and legal accommodations that correspond to how the adult approaches learning and processing information;

- the professional development of teachers, tutors, volunteers, and program leaders to ensure that they understand and recognize principles of LD-appropriate instruction; and
- the implementation of one or more models of LD-appropriate instruction.

Creating an Appropriate Learning Environment

The instructional environment may seem like the one aspect of instruction that is the most difficult to alter. There is likely no budget for knocking out walls or replacing furniture. Although those may be desirable environmental changes, the instructional environment can be effectively enhanced through such features as seating arrangements, location of resources, noise and lighting levels, adaptable spaces, decorations, and general atmosphere.

Your ability to alter the learning environment can be particularly critical to the success of adults with learning disabilities, who may be either susceptible to distractions or uncomfortable practicing certain basic skills in view of others. The learning environment needs to be flexible to accommodate the demands of different lessons and various groupings of learners.

In addition to organizing physical space, you will want to involve the learner in creating a "strategic" environment that promotes and supports the learner's independence. You can successfully create this environment by doing the following:

Place a value on creating a strategic environment. Use every opportunity to guide learners to be active and independent. Frequently ask questions such as "So how would you do that?" "How would you remember to do that?" and "How would you find that information?"

Recognize the factors that increase learner motivation. Learners need to understand the instructional process, be involved in making decisions

about what is to be learned, and experience the success that comes from correctly applying in real-life contexts the knowledge and skills that have been mastered.

Realize that instruction revolves around the everyday needs of the learner. Your instruction should focus on teaching adults to be independent and on helping them to succeed in their various life roles.

Regard learners as equal partners in the learning process. Adult learners are rich reservoirs of knowledge and past experiences; they come to literacy programs with valuable information about how they have learned, how they have compensated for things they cannot do, and how they have succeeded. Your information about effective instructional practices is a good complement to the learner's information. Instruction that is designed around the learner's strengths, needs, and interests holds the greatest potential for success.

Encourage learners to keep track of their progress. Motivation increases when learners are taught to keep track of their accomplishments, make decisions about what to learn next and when to learn new information, and recognize when they need to review material or seek assistance. Keeping track of their progress on a graph or chart helps them to measure their progress visually.

Involve significant persons in the learner's life, whenever possible, in promoting learning. In helping learners to master new skills and to recognize when and where to apply them, your job will be easier if you can enlist the support of others. The learner's family, friends, and coworkers can encourage her or him to apply new skills at home and at work.

Individualize instruction. The more a learner is able to practice and use skills, the greater the possibility the skills will be applied to other situations. The learning environment must allow for learners to work on individual goals. Only through individualizing instruction as much as possible can you meet learners' specific needs.

Making Instructional Adaptations and Accommodations

Within the teaching/learning environment, accommodations are legally required adaptations that ensure adults with learning disabilities an equal chance for success in learning. A literacy program's obligation to provide accommodations to learners is a form of nondiscrimination. (Refer to *Guidebook 1: Preparing to Serve Adults with Learning Disabilities* for more information on the laws which provide civil rights protections for persons with disabilities.)

Most accommodations cost little or nothing and are easily provided, *e.g.*, simple seating or equipment rearrangements; allowance of extra time to complete tasks; and use of tape recorders, headphones, color coding, highlighters, large-print materials, and index and cue cards. A variety of references are available for understanding and selecting alternatives to enhance the success of adults across life situations (refer to the bibliography in this guidebook).

Accommodations are sometimes considered modifications, and in other instances are considered as the removal of barriers. Both conceptualizations are correct. For example, if a learner with motor control difficulties is required to provide a written report, you may be able to modify the requirement and allow the learner to write on wide-lined paper. If the reason for the report is to demonstrate the learner's knowledge of a topic (as opposed to the learner's writing skills), you might accommodate the learner by allowing him or her to do the report orally, thus removing the barrier of the writing task.

An appropriately selected instructional accommodation not only provides equal access to learning opportunities but also minimizes the learner's likelihood of failure. Appropriate educational accommodations are determined by taking into account the adult's unique learning needs.

Instructional adaptations are accommodations that are made outside the context of the law. These are frequently made for any learner (with or without documentation of a learning disability) who exhibits difficulties acquiring, storing, or remembering information for later use. Such adaptations are simply logical choices of tools or approaches that (1) make tasks more manageable (*e.g.*, use of a tape recorder for memory and auditory processing problems; use of a calculator for solving math problems) and (2) enable the individual to have greater control of a situation (*e.g.*, the opportunity to work in a room free of distractions; the allowance of frequent breaks).

You may make material adaptations if (1) the text is too fast-paced, abstract, or complex, (2) the learner has difficulty organizing the material, (3) the learner lacks the experiences and background knowledge necessary to make the new information meaningful, or (4) the learner needs information broken down into smaller chunks and simplified. In such cases, you can alter existing materials, provide more intense and enhanced instruction for the learner, or find alternative materials.

Many accommodations provided to individuals with learning disabilities in academic, vocational, and employment settings involve altering place, time, or performance conditions. Such accommodations allow the individual to process information in his or her own way while the learning situation is adjusted. These types of accommodations are not sufficient, however, if the individual still processes information in a manner that does not help him or her meet core academic, vocational, or employment demands. For example, providing for oral administration of tests may not benefit an individual if the oral administration negatively affects the use of good test-taking strategies, or if the test taker does not know good test-taking strategies. Likewise, note-takers may not lead to improved test performance if, as a consequence of someone else's taking the notes, the learner does not comprehend the information, has difficulty organizing it, or struggles with studying.

Successful programs for individuals with learning disabilities provide ongoing, intensive, explicit, and direct instruction in strategies that enable adults to use skills to become independent learners. Once adults learn strategies, they are better able to profit from accommodations that

allow for independent learning and performance. However, adults who must face the demands encountered in academic, vocational, and employment settings on a daily basis often have not been taught appropriate strategies. In these instances, accommodations that only provide performance alternatives may not adequately address the cognitive barriers that prevent success. Accommodations that reduce cognitive barriers associated with learning disabilities by enhancing the adults' strategic learning are at least as important as the other types of accommodations and interventions that are frequently provided.

A significant amount of research has been conducted on methods that teachers can use to enhance and transform content in ways that will accommodate different modes of processing information. A clear set of recommendations and procedures has been developed to help teachers shift their approaches on content-based teaching to teaching that is more sensitive to learners' information-processing needs. Specifically, this line of research indicates that more time needs to be spent on

- selecting the critical information (skills, strategies, content);
- deciding what is the best way to think about and organize that information;
- identifying potential problems in information processing;
- planning instructional activities that facilitate good information processing;
- providing explicit explanations and leadership during instruction;
- checking frequently to ensure that adults have made appropriate connections and have learned the information; and
- ensuring that adults have fully mastered critical information before moving on to the teaching of additional content.

Making Information-Processing Accommodations

You can shift to instruction that is more accommodating to the range of information-processing differences by teaching SMARTER, which is an acronym for a series of instructional steps. The SMARTER routine has been adapted from Lenz and Scanlon (1998). When implemented, SMARTER provides a framework for selecting accommodations that can address information-processing differences for adults with learning disabilities.

The acronym stands for:

Shape critical questions

Map critical content

Analyze for learning difficulties

Reach instructional decisions

Teach effectively

Evaluate mastery

Revisit outcomes and plans

Details of the SMARTER routine are as follows:

Shape Critical Questions

Guidebook 3 describes a planning process that involves shaping a set of critical questions to guide unit and lesson planning. The process begins by developing three or four content-related questions that are critical to a lesson and that the learner should be able to answer to capture the essence of the lesson. The questions will then shift instructional planning from activities and objectives toward the types of thinking that must be done to complete activities and objectives. A question can be tied to conceptual knowledge *(e.g.*, How do you rent a car?) or performance knowledge *(e.g.*, How do you write a paragraph?). The question will make instruction more adult-centered in regard to information processing.

Map Critical Content

Draw a content map of the information that the learner will need to know to answer the questions. The map should be simple and focus on the critical concepts and supporting details that represent your best ideas about how to help the adult think about and remember the information. Plan the structure to provide a way for the learner to talk about the information if you asked, "What was that lesson about?" This map will help the practitioner focus on what information might be adapted.

Analyze for Learning Difficulties

Examine the questions and the content map and identify what could possibly make this information difficult to process.

Reach Instructional Decisions

Using the critical questions and the content map as a guide, decide how you will make accommodations to enhance the information so that it is more easily learned and will address information-processing differences. Adaptations should be based on the level of information processing that serves as a barrier to learning and performance (that is, acquiring information, storing and retrieving information, expressing information and demonstrating competence).

Select an instructional tactic or device or adaptation, and decide how to use it to enhance learning. For example, if there are many details, then memory may likely be a barrier. You can teach learners through an activity where they create a mnemonic device to help them remember the details and can then help learners connect the details and mnemonic to a critical concept.

The following table shows the types of adaptations that you might need to provide for different types of learning difficulties. It also lists the instructional goals that can help learners improve their ability to perform necessary skills, reduce the need for accommodations, and move to a more independent level of learning. For example, you may choose to help learners develop a mnemonic to remember large amounts of information to meet immediate academic demands. However, you should also consider how learners might be taught to identify and organize information that needs to be remembered and then how to create their own mnemonics that could aid remembering.

Learning Difficulty	Short-Term Adaptation	Long-Term Instructional Goal
1. Abstractness	When content appears conceptual, hypothetical, or impractical, learners need to be provided with more concrete examples, analogies, interpretations, or experiences.	Learners should be taught how to seek more examples, explanations, and interpretations through questioning and research.
2. Organization	When organization is not clear or is poorly structured, learners need to have the organization made more explicit for them.	Learners should be taught how to survey materials and identify text organization, read to confirm organization of ideas, and reorganize information for personal understanding and use.
3. Relevance	When information does not appear to have any relationship to learners or their lives, learners need to have the connections between information and life situations made more explicit.	Learners should be taught to ask appropriate questions of relevance, search for personal connections, and explore ways to make content relevant.
4. Interest	When information seems boring, learners need to have information and assignments presented in ways that build on their attention span, participation, strengths, and interests.	Learners should be taught self-management strategies for controlling attention in boring situations and how to take advantage of options and choices provided in assignments to make work more interesting.
5. Skills	When learning specific content requires skills beyond those possessed by learners, learners need to be instructed in the prerequisite basic skills.	Intensive instruction in the basic literacy skills required for mastery of specific content should be presented in small, manageable chunks and should be related and applied to the specific content.
6. Strategies	When the learning requires that learners approach tasks effectively and efficiently, learners need to be cued and guided in how to approach and complete learning and performance tasks.	Intensive instruction in learning strategies should be provided to those learners who do not know how to approach and complete tasks.

Learning Difficulty	Short-Term Adaptation	Long-Term Instructional Goal
7. Background	When learning content assumes critical background knowledge beyond the learners' personal experiences, learners need to have information presented in ways that are meaningful to them.	Learners should be taught how to be consumers of information from a variety of information sources and to ask questions of these sources to gain knowledge and insights.
8. Complexity	When learning tasks have many parts or layers, learners need information or tasks broken down and presented more explicitly and in different ways.	Learners should be taught how to chunk tasks, graphically represent complex information, ask clarifying questions, and work collaboratively in teams to attack complex tasks.
9. Quantity	When critical information that is complex or sizeable is introduced, learners need to have the information presented in ways that facilitate remembering.	Learners should be taught strategies for chunking, organizing, and remembering information.
10. Activities	When instructional activities and sequences do not lead to understanding or mastery, learners need to be provided with additional or alternative instructional activities, activity sequences, or practice experiences to ensure mastery at each level of learning before instruction continues.	Learners should be taught to independently check and redo work, review information, seek help, ask clarifying questions, and inform others when they need more or different types of instruction before instruction in more content begins.
11. Outcomes	When information does not cue learners how to think about or study information to meet intended outcomes, learners need to be informed of expectations for learning and performance.	Learners need to be taught how to identify expectations and goals embedded in materials or to create and adjust goals based on previous experiences.
12. Responses	When material does not provide options for learners to demonstrate competence in different ways, learners need to be given different opportunities to demonstrate what they know in different ways.	Learners need to be taught how to demonstrate competence, identify and take advantage of performance options offered, and request appropriate accommodations on evaluations.

Teach Effectively

Inform learners about the accommodation tactics or devices that you have selected. Explain to learners how you are teaching them and then involve them in creating and using the device. Be explicit as you use the device.

For example, in the case of the mnemonic device, explain to learners that the mnemonic will help them remember information. Involve learners in the creation of the mnemonic and make them aware of how they are attacking the demand. After the mnemonic has been constructed, make sure that learners list the steps that they went through as they constructed the mnemonic.

The next time you need to create a memory device, remind learners of the procedure, and lead them through the process again. The more times that you repeat the process, the more likely learners will understand how they can attack memory tasks independently. By using a few simple prompting questions you can help learners to make such observations, e.g., "How does a mnemonic device help you to recall?"

Evaluate Mastery

Continuously check the learner's progress in processing information to make sure that the devices you have selected have accommodated the learner's need. For example, if remembering was the anticipated difficulty, is there an increase in the learner's ability to remember information?

Revisit Outcomes and Plans

After the lesson is over, are learners able to answer the critical questions? If not, then the accommodations selected for the lesson may not have been aligned with the intended lesson outcomes. Either reteaching is needed, or the critical questions may need to be rewritten because they were inappropriate. For example, maybe the critical question should have been "When do you need to rent a car?" rather than "How do you rent a car?" because that was what was actually taught.

Making Cognitive Accommodations

You are more likely to be successful with adults with learning disabilities when they distinguish the critical information from the supporting information and present the critical information orally, visually, and in ways that actively involve the learner, including frequent opportunities to manipulate the information under teacher leadership. However, this is

not enough. You must also be prepared to facilitate information processing by teaching the learner new ways to think about the information. What kinds of questions should the learner be asking? How should the learner answer these questions? How should the answers be structured? What kinds of connections and associations to background experiences should the learner be making? How will the learner be able to remember this information? These types of questions serve as the basis for developing instructional accommodations that immediately compensate for ineffective or inefficient learning.

Altering instruction of adults with learning disabilities requires that practitioners understand and recognize the critical cognitive connections embedded in the content of the various curriculum options. This will require that many practitioners shift their attention away from texts, materials, and activities and towards giving more time to reflecting on critical ideas and connections.

Two Frameworks of LD-Appropriate Instruction

Direct Instruction

The direct instruction model of teaching offers a structure to teach basic skills, such as knowing how to decode simple three-letter words, as well as more advanced skills, such as knowing how to paraphrase a reading passage or write a four-paragraph essay. The direct instruction model of teaching is well supported by both cognitive and behavioral learning principles. In addition, there is ample research that supports direct instruction as one type of effective instruction for individuals who may enter the learning situation with skill deficits.

There are four essential phases or steps in the direct instruction model. The initial steps are characterized by the teacher's controlling the instruction with an explicit presentation of the skill or information to be learned and then modeling and guiding practice with extensive, elaborate feedback to the learner. Once a skill is learned to mastery in the classroom, the learner takes responsibility for using and adapting the skills learned to meet real-life demands.

Direct instruction is based on the teacher's engaging in some important pre-instructional planning tasks, such as developing clear objectives for the lesson (see the S in SMARTER) and conducting a task analysis or content analysis of the skill or information to be presented (see the M in SMARTER). This helps the teacher define with some precision the exact nature of the specific skill or information to be presented and what the learner needs to do to perform to a desired level.

The four phases of direct instruction are as follows:

Phase 1: Provide Objectives, Establish Expectations, and Introduce the Skill

Begin the session by ensuring that the learner understands the purpose of the session and the skill/information to be learned. This introduction includes building a rationale for the focus of the session and ensuring that the student is paying attention and is ready to learn. Providing rationales and overviews, and making connections with previously learned skills, can be quickly accomplished and are particularly important for student motivation.

Phase 2: Introduce and Model the Skill

Present the skill step-by-step and demonstrate/model the skill. The skill should be presented both visually and verbally to assist the learner in identifying the skill steps as they are modeled. Ask the learner to watch observable behaviors, as well as to listen to your self-talk or "think alouds," which demonstrate the thinking skill steps.

Phase 3: Guided Practice with Feedback

Provide a series of experiences to allow the learner to try out the skill while you carefully monitor performance. The initial practice should allow the learner to actively practice the skill with the support and feedback needed to perform the skill correctly. For example, if a student is learning how to paraphrase, then guided practice can begin with the learner reading a short paragraph and putting it into his or her own words, rather than starting with longer reading passages, such as a page or a chapter. By starting small, you can more easily monitor this phase, and the learner does not get too frustrated.

Some would argue that giving feedback is the most important task in direct instruction. Without clear and explicit feedback, a student can practice incorrectly or never be able to distinguish a skilled from an unskilled performance. Feedback should be immediate and specific. Learners benefit from praise that is clearly targeted at what was done well and from corrective feedback followed by another chance to do the skill correctly. Maintain this phase until the learner is able to demonstrate that he or she can perform the task correctly with little help from you.

Phase 4: Independent Practice and Generalization

Independent practice takes the form of the learner completing tasks without instructor assistance, and can easily be accomplished through homework. Identifying specific situations outside of the instructional sessions where the skill can be applied in real life encourages generalization. However, the ability to identify such situations does not come naturally for some individuals. You can promote generalization by planning with the learner when the skill can be used and then by having the learner keep track of skill use outside of the session.

You can use the direct instruction model to help students learn basic skills and knowledge. This model of instruction comes from systems analysis, cognitive psychology, and teacher-effectiveness research, and is supported by an extensive research base on its effectiveness for individuals with learning disabilities.

Information Processing

Information-processing theory arises from work in cognitive psychology. This theory offers a useful framework that represents the multifaceted processes involved in learning information and higher-order thinking skills. Information-processing theory is particularly useful when working with individuals with learning disabilities because it helps practitioners think about how information can most clearly and explicitly be presented so that the learner is actively and appropriately involved in the learning process.

Examining the basic processes that govern learning can help literacy providers think about the problems individuals with learning disabilities can have when they try to learn new information. For new learning to occur, the material must be input through one or more of our senses, attended to, perceived, and remembered.

Input

According to information-processing theory, experiences are first received as input through one or more of the senses. Typically, reading instruction can be presented using visual, auditory, tactual, or kinesthetic input. For most individuals, and especially individuals with learning disabilities, the more modalities that are used, the better the chance that the input will be remembered. Thus, many programs for individuals with learning disabilities encourage the use of multiple input channels.

Attention

Once information is presented to one or more of the senses, attention comes into play. Attention is the learner's ability to focus on the information at hand. In most situations, the learner can only pay attention to selected information. Sometimes the learner pays attention to information that does not help him or her learn. For example, during a lesson on the short "a" sound, the learner may pay attention to the teacher's red shirt or the rainy weather outside the window, rather than the content of the lesson. In other situations, the learner may pay attention to the information presented, but not to the critical attributes of the lesson. For example, a practitioner may present words that begin with the letter "b," such as band, banjo, or bong, and the learner may pay attention to the meaning of the words rather than the sound of the first letter. It is critical to identify clearly what the learner should specifically pay attention to and to check throughout the lesson that his or her attention is focused on the critical attributes of what is being taught.

Perception

Once input information has been attended to, how the information is perceived can be a challenge. Based on a person's specific learning disability, that individual may have difficulty correctly interpreting information from one or more of the sensory input channels. For example, a person with an auditory processing disability may misperceive what is said to him or her. The statement "she was very bad" could be misperceived as "she was very mad." An individual with a visual perceptual disability may read slowly due to difficulty perceiving the difference between "b" and "d." This disability makes words with those letters challenging to quickly recognize.

Working Memory

Once information is perceived, it enters working memory (also known as short-term memory) where the information is briefly stored. Working memory has a limited capacity, and functions most efficiently when the perceived information is immediately acted upon. For example, Shawn asks for an unfamiliar telephone number in order to place a call. Once Shawn recognizes the numbers, the information enters working memory; this allows Shawn to briefly store the information at hand. In order for Shawn to remember this unfamiliar series of numbers, she must perform some sort of "mental work" to keep the information active. In this case she might keep repeating the numbers as she dials. Working memory

can easily become overloaded when too much information is presented and attended to. If a learner does not perform some sort of "mental work," like self-questioning, thinking about how the new information fits with what he or she already knows, or looking for patterns in new information, the information that enters working memory is lost.

Long-Term Memory

Information in short-term memory can be quickly forgotten unless it is transferred to long-term memory. Long-term memory has been compared to a computer because it encodes and stores information. Long-term memory stores four types of information: verbal knowledge, intellectual skills (*i.e.*, knowing how to perform a complex task like paraphrasing), visual images, and episodes. This type of memory storage can be compared to four types of instruction: teaching information, teaching strategies (how to acquire and remember information), teaching through visual images, and teaching through use of memorable experiences, stories, and narratives.

Long-term memory is conceived as an intricate network of connected information and memories which helps individuals make sense of their world. Information-processing theory tells us that connecting new information with a person's prior knowledge helps new learning find a place in long-term memory. Highly successful learners actively and appropriately engage in new learning and automatically take new information and connect it with what they already know, naturally building on their long-term memory knowledge networks. Many individuals with learning disabilities do not automatically do this and thus need help connecting new information and experiences to what they already know. Use of mnemonics, concept maps, visual images, and graphic displays can be important tools for enabling individuals with learning disabilities to remember what is being taught. These devices help the learner see how information is organized and can aid long-term memory.

A learning disability can interfere with any of the stages of information processing. Understanding the learner's unique set of information-processing strengths and needs can guide you in structuring instruction to build on those strengths, as well as help the learner compensate for his or her areas of need.

Whereas the direct instruction model (refer to pages 21-23) assists us in learning skills and procedures, the information-processing model directs us in how to help the learner develop higher-order thinking skills so that

he or she can remember information, develop strategies to attack intellectual tasks, remember information through use of graphics and images, and use stories and episodes from his or her life to attach meaning to experiences. The SMARTER planning and teaching routine (refer to pages 13-18) incorporates key elements from both of these frameworks.

Collaborative Teaching/Tutoring

Principles for Teaching/Tutoring Adults with Learning Disabilities

The primary reason for providing intensive one-to-one instruction is that the adult with learning disabilities cannot learn independently in ways that others learn. However, simply receiving one-to-one attention from a practitioner will not necessarily meet the learner's needs. A practitioner who does not know how to plan and structure instruction may increase the learner's frustration.

To be effective, you must provide instruction that helps the learner acquire needed skills and content information. To do this, you must know how to

- select the appropriate curriculum;
- take into consideration the learner's background;
- prepare and transform the information in ways that will make it more understandable;
- provide the structure for lessons; and
- incorporate specific instructional tactics into each session that compensate for learning disabilities.

All teaching/tutoring sessions for adults with learning disabilities must be built on the following important principles:

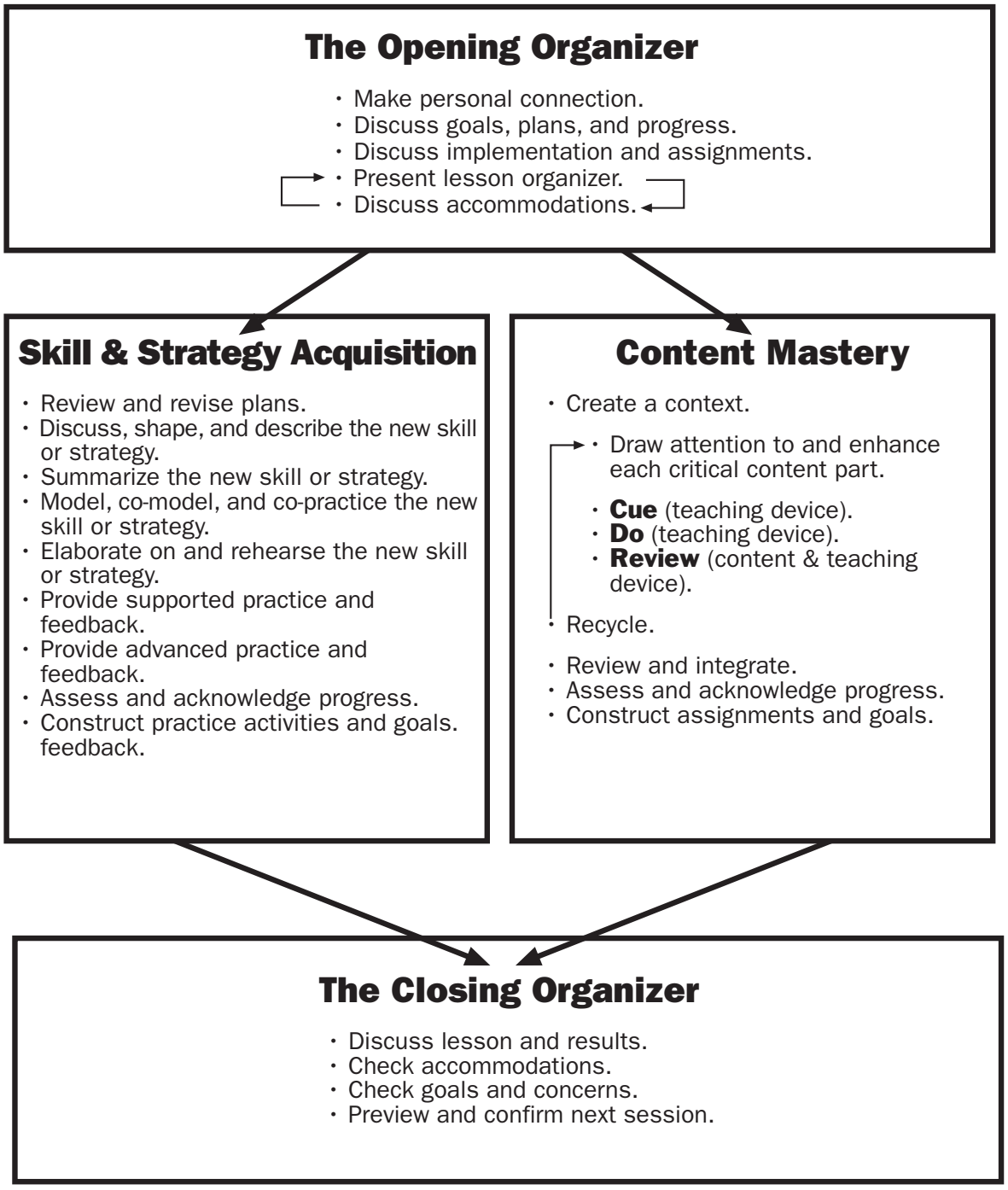
1. At all stages of instruction and decision-making, learners should be offered instructional choices related to what, how fast, when, and where he or she is learning.
2. Instructional sessions must be structured in ways that ensure that the learner is informed about how he or she is being taught and progressing toward targeted goals.
3. Instructional sessions must be structured to ensure mastery of targeted goals and should be characterized by instruction that is more explicit than that provided to adults who do not have learning disabilities.
4. Each instructional session should follow a similar structure or routine so that the learner knows what to expect and becomes comfortable with the learning process. Following an established routine will enable the adult to learn how to approach learning and can become more involved in shaping future instructional sessions.
5. Instructional sessions designed to promote skill or strategy mastery (e.g., word attack, mathematics, writing, social skills, comprehension strategies) should be structured differently from instructional sessions designed to promote content mastery (e.g., insurance, job knowledge, civil rights, health care, child care).
6. The practitioner should know the skills, strategies, or content that will be taught.
7. The practitioner should know a variety of strategies and techniques for promoting learning.
8. An overall climate and relationship that helps the learner see the practitioner as a mentor and an ally in the struggle to gain literacy skills should be nurtured.

The skills you need to provide excellent teaching/tutoring should be carefully introduced, developed, and nurtured over a long period of time. The following section presents two routines that you can use to structure instructional sessions. Although there are many similarities, there are some important differences.

The first teaching/tutoring routine focuses on providing instruction in a skill or strategy. The second tutoring routine focuses on providing instruction in a content area.

FIGURE 5.1.

Components of collaborative teaching/tutoring



Each routine has been structured around research on effective instructional sequences and tactics for adults with learning disabilities. Figure 5.1 shows the four parts of collaborative teaching/tutoring, which centers around

- continuous use of graphic organizers,
- frequent links with the learner's background knowledge,
- adaptations and devices that make the content more concrete and accessible orally and visually, and
- collaborative decision-making about what to learn, how learning occurs, and how to accommodate for learning differences.

Constructing a Collaborative Teaching/Tutoring Routine for Skill and Strategy Acquisition

Strategic instruction helps the learner acquire skills and strategies that the learner has not acquired because of a learning disability. For example, many individuals have not learned to read because of poor instruction, poor curriculum, environment, or frequent absence from school. Although these factors may also affect individuals with learning disabilities, having a learning disability will prevent the learning of skills or strategies that other learners can acquire without additional attention during instruction.

Collaborative teaching/tutoring in a skill or strategy area centers around: (1) the selection of skills and strategies that will help the learner meet important demands, (2) continuous use of graphic organizers, (2) the use of instructional levels or stages to ensure continuous progress towards mastery, and (3) very explicit or teacher-directed instruction during the initial stages of learning a skill or strategy that gradually shifts to learner control and application, and (4) collaborative decision-making about what to learn, how learning is occurring, and how to accommodate learning differences.

The following tables describe the steps in the collaborative teaching/tutoring process and the possible dialogue you might have with the learner.

The Opening Organizer

Collaborative Teaching/Tutoring Step	Dialogue with Learner
Make personal connection. Exchange greetings. Check to see how the learner is doing and if there are things happening in his or her life that should be taken into consideration for this session or in the completion of the overall program. Present the opening organizer form that can be used to introduce session and record information, and confirm closing time for session with learner.	*"Hi, Andy. So, what is going on in your life this week? Let's use our organizer form to check out where we are. Our schedule says we are going to work about 45 minutes on reading, right?"*
Discuss goals, plans, and progress. (1) Review goals and confirm that program goals remain important. (If goals need to be changed, then return to introductory session planning activities.) (2) Review overall plan related to how goals will be achieved using a program graphic organizer. Discuss changes. (3) Review progress toward current goals. Point out successes, concerns, and work to be done for past accomplishments, current lesson, and for the overall program.	*Let's review our goals. Any changes? Let's look at our plans for working toward those goals. Now, let's look at our progress towards these goals."*
Discuss implementation/assignment. If appropriate, discuss if the skills or strategies discussed in the last session were used. If an assignment was given to apply a skill, check to see if the assignment was completed. Reinforce attempts to use a skill or strategy; delay discussing the results of the assignment at this time. Discussion of the results should be woven into the lesson.	*"The last time we met, we set goals related to improving reading comprehension. Let's see what we wrote down as assignments. Did you write down the different tasks that you did this past week that were related to reading? Do you have some reading materials? Good. We can use these today."*
Present lesson organizer. (1) Present an overview of the lesson, and discuss how it relates to the overall program plan. (2) Use a graphic lesson organizer to show the learner how the information in the lesson will be structured. (3) Discuss why the lesson goal is important and how the information can be used. Discuss how the information might have an impact on real-life situations or overall program progress. (4) Discuss, agree on, and write the goal, outcome, or the central questions to be addressed in the lesson. Collaboratively paraphrase the goal for the lesson in words different from those written on the graphic organizer and check to make sure the learner understands and agrees with the goal. (5) Discuss activities and assignments. Write on the lesson organizer the types of activities that will be required in the lesson. Discuss how achievement of the goal targeted for this lesson will be evaluated.	*"Tonight we start learning a strategy for paraphrasing information as you read. Here is what we are going to do tonight. We are going to get this far. Is this still okay?"* *"Looking at the information in the content organizer, let's decide on what we want to accomplish tonight. Let's write our goals on the lesson organizer."* *"To get there, here is what I think we need to do. Let's write these tasks on the lesson organizer."*

Discuss accommodations. Discuss the types of accommodations that you have planned and describe why you have included them in the lesson. Check with the learner to determine if this seems like a good way to approach the lesson. Encourage the learner to let you know if it seems that a different approach to instruction or assessment might be helpful.	*"Your test results indicated that you are most successful in reading when you have the accommodation of a tape recorder. The evaluator said that it's helpful for you to have materials that you are reading on a tape so that you can hear the words as you read along. Do you agree?… OK. I've made a tape of the passage that you are going to read and try to paraphrase. You can play the tape as many times as you like, starting and stopping to go over parts that you want to hear again. You've used tape-recorded texts before, remember?… Yes, when we were reading the text on good nutrition. And you found this helpful, right?… Good. Be sure to let me know if you have questions or if there's a problem using the tape recorder or if you think some other approach might be more helpful to you."*

Skill and Strategy Acquisition Routine

Collaborative Teaching/Tutoring Step	Dialogue with Learner
Review and revise plans. (1) If appropriate, ask the learner to share how he or she has used the skills taught during the last session. Provide informative feedback on assignments. When appropriate, review information from previous sessions. (2) Based on the learner's performance on assignments, adjust the activities for the lesson. (This might require abandoning the current lesson and revisiting the previous lesson. If the previous lesson is revisited, determine with the learner how the lesson should be revised so that learning is ensured.)	*"Let's quickly look at the list of places you needed to read this past week and the kinds of reading materials you needed to use."*
Discuss, shape, or describe the skill or strategy. Focus the learner's attention on the information structure in the graphic lesson organizer. Explain each part of the skill or strategy and write notes with the learner on the graphic lesson organizer as you describe each part of what is to be learned. Make sure that the explanation follows the information on the graphic lesson organizer. Begin by discussing the skill, then ask the learner to share how he or she is thinking about performing the skill or strategy. Shape what the learner knows until it is clear that the learner understands the skill or strategy. If the learner does not have knowledge of the skill or cannot describe a strategy, describe how he she might perform the skill or strategy.	*"Let's start learning how to paraphrase. Let's start with how you already read. Read this for me. Let's talk about that. There are three good things that you do. Let's write them down. Let's add a couple of steps. Now try again. What do you think of this strategy we have created?… Okay, let's modify it a little…"*

Summarize the new skill or strategy. After the skill or strategy has been identified, summarize the steps for performing the skill or strategy. List the steps on the lesson organizer. Discuss or identify a way for the learner to remember the steps. If possible, write how the skill or strategy will be remembered.	*"Okay, here are the steps. Explain them to me. How are you going to remember them? Let's figure out a way to remember them together."*
Model, co-model, and co-practice the new skill or strategy. Once the steps have been listed, tell the learner that you want to model how the skill or strategy should be applied. Perform the skill or strategy. Talk aloud as you demonstrate. Tell the learner how you are following each step, explain what you are thinking, and describe how you are checking your performance to make sure it is correct. After you have provided a good model, ask the learner to help you. Ask for a little help at first and gradually ask for more assistance from the learner until he or she is co-modeling. Gradually drop out some of the thinking aloud elements until the learner is simply co-practicing the skill or strategy with you.	*"I want to show you how to apply this strategy as you read. I am going to follow the steps that we have created. As I follow the steps, I am going to think aloud. In a minute, I am going to ask you to do the same thing. Here I go. Follow your notes as I use the steps of the strategy."*
Elaborate on and rehearse the new skill/strategy. Once the skill has been presented, ask the student to use the steps that you have given him or her to explain how the skill is to be used. After you are sure that the learner thoroughly understands the skill, help the learner commit the skill or strategy to memory. Use a remembering system when appropriate. Make sure that the learner can explain the use of the skill or strategy from memory before he or she begins practice.	*"Now, we need to memorize the strategy steps. First, explain the steps to me. Great! Now, let's memorize the steps. We created a way of remembering the strategy—a mnemonic—now we are going to use that to make sure that you can remember it. First, let me show you how I would use it . . . Ready? . . . Let's rehearse the steps. We need to have this memorized before we start practicing this . . . Great, you know all of the steps by heart . . ."*
Provide supported practice and feedback. (1) Begin supported practice with easy tasks and as much support as possible to ensure successful performance of the skill of strategy. Practice should continue until the learner is confident and fluent. Supported practice should be gradually faded until the learner is performing the skill or strategy without assistance. (2) Feedback should start with the learner. Ask the learner to evaluate his or her progress. Ask the learner to identify what is going well and what needs more work. Pinpoint exactly what is going well and what needs work so that goals can be established for practice. Provide additional explanations, models, and practice as necessary. Use the "I do it; We do it; You do it" teaching tactic.	*"Here is a reading passage from one of our books here at the literacy center. It is very easy to read. I want you to try the strategy out on something easy first. Try it; I will help you . . . Good. Let's talk about what you did right. What do you think? Okay, what do we have to work on? . . . I agree. So let's go back to what we talked about. Where are your notes? What is the rule? So, what do we need to do? Here, let me do it . . . Now, let's do it together . . . Okay, now you do it. The next time we practice, we need to remember to work on these three things. Let's write that down in our notes."*

Provide advanced practice and feedback. (1) Advanced practice begins after the learner has demonstrated mastery of the skill or strategy under easy conditions. During advanced practice, increasingly difficult tasks are provided until the learner has mastered the skill or strategy at the level desired. (2) Feedback discussions should be led by the learner and supported by the tutor.	*"This level of instruction may take several sessions to attain. We have come a long way… Now, let's try paraphrasing those insurance directions… Now let's do that job manual… Are you ready for the training guides?… Now what do we want to work on?"*
Assess and acknowledge progress. (1) Assess progress on some type of evaluation measure or by reviewing work completed in the lesson. (2) Acknowledge progress by asking the learner to describe what has been accomplished. Together, identify at least three accomplishments made during the lesson.	*"You are doing a great job of paraphrasing. As you paraphrase, I am listening for ___. Let me ask you questions to see if you are comprehending… You are paraphrasing well, but you are giving me a lot of details… Let's focus on the big or main idea… Here, try this…"* *"So, let's list what we have accomplished tonight."*

Constructing a Collaborative Teaching/Tutoring Routine for Content Mastery

Strategic instruction ensures that the learner acquires critical content information not previously acquired because of the presence of a learning disability. Many individuals with marginal literacy skills may not have acquired important information required for daily living.

Collaborative teaching/tutoring in the content areas centers around (1) the selection of critical content that will help the learner meet important demands, (2) the continuous use of graphic organizers, (3) the use of instructional devices that can enhance the organization, understanding, remembering, and application of information, (4) the explicit guidance of the practitioner in learning targeted content, and (5) the collaborative decision-making process about what content to learn, how learning is occurring, and how to adapt instruction for learning differences and disabilities.

Some common teaching devices can enhance content learning during collaborative tutoring. (See the table on page 35 for some of these devices.)

Devices for Enhancing Content Acquisition

Purpose of the Device	Techniques for Presenting the Device	
	Verbal	**Visual**
Organize: arrange information in meaningful ways	summarization chunking advance organizer post organizer verbal organizational cues	outline web hierarchical graphic organizer table grid flowchart
Clarify: understand words or concepts	analogy comparison synonym metaphor antonym simile example	symbol concrete object picture model diagram
Describe: tell a story	current event past event fictional story hypothetical scenario personal story	film filmstrip video
Demonstrate: show through action	role play dramatic portrayal	physical gesture/ movement moveable objects demonstration
Promote recall: remembering	acronym keyword association	visual images sketches

The most powerful devices combine both verbal and visual presentations. The devices are used to transform content and make it more understandable and memorable. Combining verbal and visual forms of presentation *and* involving the learner in constructing and using the device increases the learnability of content information. This multisensory approach to teaching content can improve how adults process information. The use of these devices, and the manner in which the teaching/tutoring session is actually structured, may vary based on the content of the session and the characteristics of the learner. The following structure is an example of how a collaborative teaching/tutoring session in specific content information might be approached.

The Opening Organizer

Collaborative Teaching/Tutoring Step	Dialogue with Learner
Make personal connection. (1) Exchange greetings. Check to see how the learner is doing and if there are things happening in his or her life that should be taken into consideration for this session or in the completion of the overall program. (2) Present the opening organizer form that can be used to introduce the session and record information. Confirm the closing time for the session with the learner.	*"Hi, Bob, did you get into that training program?… Great!… Do we need to be doing anything to help you out there? Here is our opening organizer that we will use to help us get started. Let's see, we have about an hour, right?… So, we can work until about 9:00 P.M., right? Is that when your ride comes?… Okay, we will be done by then."*
Discuss goals, plans, and progress. (1) Review goals and confirm that program goals remain important. (If goals need to be changed, then return to introductory session planning activities.) (2) Review overall plan related to how goals will be achieved using a program graphic organizer. Discuss changes. (3) Review progress toward current goals. Point out successes, concerns, and work to be done for past accomplishments, current lesson, and for the overall program.	*"Bob, what are the three goals that we are trying to achieve?… Okay, we have already worked on your writing goal quite a bit. So, what did we decide last time?… Okay, we decided to let you keep practicing the writing strategy, but start work on the next goal. Thanks for bringing the letters that you were going to write… So, where do we start today? Okay, in the last session we decided to take a break from writing and begin working on the second goal of understanding insurance. Is that still important to you?… Okay, so, we are going to continue with that goal in this session. What is the goal that we will work on after the one on insurance?…"* *"Bob, why don't you look at the progress chart and tell me how you are doing? So, what do we need to work on?"*
Discuss implementation/assignment. If appropriate, discuss how the information learned in the last session was used. If an assignment was given, check to see if the assignment was completed. Reinforce attempts to use the information. Also, reinforce the use of skills or strategies learned from other sessions. Delay discussing the results of the assignment at this time. Discussion of the results should be woven into the lesson.	*"Let's quickly look at those letters. I can see that your sentences are getting better. Let me take some time to look at these later, and then we can talk about what to work on. Did you bring your car insurance papers that you wanted to go over?… Great, we will use them in the session."*

Present lesson organizer. (1) Present an overview of the lesson, and discuss how it relates to the overall program plan. (2) Use a graphic lesson organizer to show the learner how the information in the lesson will be structured. (3) Discuss why the lesson goal is important and how the information can be used. Discuss how the information might have an impact on real-life situations or overall program progress. (4) Discuss, agree on, and write the goal, outcome, or the central questions to be addressed in the lesson. Cooperatively, paraphrase the goal for the lesson in words different from those written on the graphic organizer and check to make sure the learner understands and agrees with the goal. (5) Discuss activities and assignments. Write on the lesson organizer the types of activities that will be required in the lesson. Discuss how achievement of the goal targeted for this lesson will be evaluated.	"*The last couple of sessions we have focused on understanding insurance… Let's look at the lesson organizer… How many types of insurance are we learning about? Right. We have already talked about life and renter's insurance. Tonight, Bob, we are going to discuss car insurance. In our next session, we will discuss health insurance. Now, why are we trying to understand car insurance? What do you want to know? Let's create some questions that can serve as our goals for tonight… Great. Let's write these three questions on the lesson organizer. Tonight, I am going to ___… And I want you to ___… Okay? So, how are we going to check to be sure that everything is clear?…*"
Discuss accommodations. Discuss the types of accommodations that you have planned and describe why you have included them in the lesson. Check with the learner to determine if this seems like a good way to approach the lesson. Encourage the learner to let you know if it seems that a different approach to instruction or assessment might be helpful.	*"Okay, so let's review what an accommodation is… That's right, it's an alternative way of doing something that is legitimately provided by someone else when you can't do something for yourself. Since writing information as we talk takes you a long time, notice that it distracts you from the information. So, I have prepared a note guide that will reduce the writing requirements. You are still going to have to write a few things down as we talk, but not so much that it will distract you. Does that sound okay?… Is there anything else that we could do?… Some of the ways that will teach you will also help you learn. As we go through the lesson, let me know if we need to find other ways to get through the information so that you understand it.*"

Content Mastery Routine

Collaborative Teaching/Tutoring Step	Dialogue with Learner
Create a context. (1) Initially, discuss how the content fits with other topics and information. (If the learner does not have essential background concepts, then you must revise the lesson to include instruction or awareness of these concepts.) Determine what the learner already knows about the content and create or add to a background key word list that you can refer to during the lesson. Using the lesson graphic organizer, explain how the content parts of the lesson are organized and how the information connects to the learner's needs and background. Make sure that the learner understands how the content is organized. (2) After each content part on the lesson graphic organizer is taught, make sure that the learner sees how each part is connected to the whole and to other parts. Make sure that the learner sees the big picture.	*"Okay, Bob, let's get started. Let's go over what we learned last time. Let's review our key word list from the last session. What do you know about car insurance?… Good… Okay, let's create a key word list about car insurance… So, let's look at the lesson organizer for tonight. We are going to look at five factors that need to be considered when selecting car insurance. They are listed here on the lesson organizer. We are going to talk about each of these factors…"*
Draw attention to and enhance each critical content part. (1) Using the lesson organizer graphic, direct the learner's attention to the part of the lesson graphic organizer that will be learned. (2) Complete the CUE-DO-REVIEW sequence on the critical parts of content depicted in the lesson graphic organizer using a teaching device.	*"Let's start with car insurance coverage. That is the first part shown on the lesson organizer. We already talked about what coverage means in previous lessons. What does it mean?… Good."*
CUE (teaching device). (1) Present and explain the teaching device that you will be using, and how you will use the device. (2) Describe what you will do and what the learner can do. (3) Explain how the device and the collaborative use of the device will help mastery of the targeted information about how much coverage you need.	*"As we talk about car insurance coverage, we are going to compare the two types of coverage. To make this concrete, I am going to use a diagram to help us compare the two. This is how I am going to use it. I will do this. Then I want you to do this… When we are done, you will be able to compare the two types of coverage and can make better decisions."*
DO (teaching device). (1) Present the content information with explicit use of a teaching device. (2) For every three statements made in teaching, prompt at least one response from the learner. (3) Involve the learner in shaping and transforming the information into a form that is understandable and memorable with the help of the teaching device.	*"I have written two types of coverage on the diagram. Let's talk about and list the characteristics of each. Okay? What do you think are the characteristics of liability coverage? Let's check the manual… What does it say?… Let's write that here….What next?… So, how are they similar?… And how are they different?… Do we have everything listed?… Good. Let's review."*

REVIEW (content and teaching device). (1) Check understanding by asking the learner to answer critical content questions, paraphrase ideas, and perform application tasks. (2) Check understanding by asking the learner to make comparisons; explain causes and effects; and explain other relationships. (3) Confirm understanding of the content. If the learner does not understand the content, then reteach the part using a different teaching device; use increased or different accommodations; or reevaluate with the learner if it is critical to learn this piece of content.	*"Bob, can you answer any of the questions that we created at the beginning of the lesson?... So, paraphrase what you know about car insurance coverage... How do they compare?... Do you feel like you know about car insurance coverage?"*
Recycle. After a content part has been learned using a teaching device, return to the section "Create a Context" and begin the process of teaching the next piece of content represented in the content structure. When all the pieces of the content have been taught, continue to review and integrate.	*"Now that we have finished discussing car insurance coverage, let's move on to car insurance cost. Let's look at the lesson organizer... So, what do you know about car insurance costs?"*
Review and integrate. Using the content structure and the teaching devices, cooperatively summarize what has been learned about all the content parts. (1) Check understanding by asking the learner to describe the information in the content structure. (2) Discuss the answers to the critical content questions with the learner. Ask the learner to paraphrase ideas and perform tasks that require use of the information. (3) Check understanding by asking the learner to make comparisons between the content; explain causes and effects; and explain other relationships.	*"Now that we have covered all three areas of car insurance, let's stand back and review... Answer the lesson questions that we created... So, what happens if you don't have car insurance?... What happens if ___ ... What do you need to do now about your car insurance?"*
Assess and acknowledge progress. (1) Assess progress on some type of evaluation measure or by reviewing work completed in the lesson. (2) Acknowledge progress by asking the learner to describe what has been accomplished. Together, identify at least three accomplishments made during the lesson.	*"Let's check to see if you have this down... Let me ask you a couple of quick questions... So, what do you think are the three biggest things we accomplished in this lesson?"*
Construct assignments and goals. Discuss assignments that need to be completed by the learner independently. If appropriate, make a list of places in his or her life where he or she might use the information. If needed, brainstorm with the learner to develop a plan to ensure that the assignment will be implemented and/or remembered.	*"Next time I want you to bring me the cost quotes and information from the car insurance companies we discussed. Also, bring in the information from your employer that describes your health insurance costs and benefits. How are you going to remember to bring it? Let's write this down and put it in your wallet. That worked well the last time, didn't it?"*

Closing Organizer

Collaborative Teaching/Tutoring Step	Dialogue with Learner
Discuss lesson and results. Using the graphic lesson organizer, quickly review the lesson and what has been learned in relation to broader program goals.	*"So, tonight we talked about car insurance. What were the three factors we discussed? How does car insurance fit in with our insurance topics from the last session?… With the next session?"*
Check accommodations. Ask the learner how he or she feels about learning, and if your teaching and/or the adaptations were okay. Ask for suggestions.	*"How was the modification I provided for writing?… What else should we do?"*
Check goals and concerns. Ask the learner if the goals are still on target and if any adjustments need to be made. Ask the learner if he or she has any concerns or if there is anything else that needs to be worked through.	*"Should we continue the next session with health insurance or do you want to go back to writing?… Okay, we will continue as planned… Is there anything else we need to be thinking about?"*
Preview and confirm next session. Check to confirm the time for the next lesson. Use the program graphic organizer to explain what the next lesson might be about. Discuss the possible content for the next lesson, agree on lesson content, and develop a general goal.	*"Great, Bob, then I will see you on Wednesday at 8:00 PM. We will discuss health insurance and you are going to bring your health insurance papers."*

Collaborative Tutoring Routines are teaching techniques developed and currently being field-tested by the staff of the University of Kansas Center for Research on Learning (KU-CRL). The concepts incorporated in this approach to tutoring are based on the Strategic Instruction Model developed by the staff at KU-CRL. Specific materials and training activities have been developed for training. Research and development activities continue to refine and validate this approach for use in a variety of educational and employment training settings, including adult literacy programs. The procedures presented here represent some of the teaching procedures currently being field-tested and are based on previously validated models. The teaching structures and examples have been adapted for use by the National Adult Literacy and Learning disabilities Center with the permission of KU-CRL.

Summary: Characteristics of LD-Appropriate Instruction

Research on intervention practices has yielded twelve characteristics of effective instruction, or LD-appropriate instruction, for adults with learning disabilities. (See the section "Understanding Learning Disabilities" in Guidebook 1). LD-appropriate instruction directly addresses learning difficulties that may result from a learning disability and should be used any time you know or suspect that you are teaching adults with learning disabilities. In short, LD-appropriate instruction is characterized as:

1. structured
2. connected
3. informative
4. explicit
5. direct
6. scaffolded
7. intensive
8. process-sensitive
9. accommodating
10. evaluated
11. generalizable
12. enduring

A detailed description of each of these characteristics follows.

Structured Instruction

Structured instruction involves systematically teaching information that has been chunked into manageable pieces. Many adults with learning disabilities have difficulty processing large amounts of information, such as complex concepts and multistep procedures. Information should be broken into smaller "chunks" and/or steps, and then these chunks should be taught systematically in sequential stages designed to promote mastery at each level.

Small steps are more readily accomplished and will help keep the learner engaged. However, it is critical that you help the learner make connections within the smaller units of information. Carefully define the immediate task, and verbally and visually break it into as many steps as necessary to "chunk" it into manageable tasks.

Once the information is chunked, your teaching structure should consider the diverse learning characteristics of a variety of adults. Teaching approaches that emphasize unstructured exploration, discussion, or group investigation during the early acquisition of new skills or information are not likely to be successful. Adults with learning disabilities may not have the questioning strategies and background knowledge required to independently organize new information in ways that help them understand and remember it.

Once information has been introduced, the learner should have structured opportunities to practice applying the information. Good practice is a balance between repetition and varied applications that allow the learner to explore the different ways in which a skill can be applied. Practice provides the learner with opportunities to develop automaticity in skill performance and to think about a new skill or knowledge and its application. Begin a practice activity by demonstrating and completing the task; then gradually shift responsibility to the learner. Verbally walk through steps required to learn the task as the adult works, and gradually shift the responsibility of talking through the task to the learner.

Connected Instruction

Connected instruction shows the learner how information in and among units and lessons are linked to the learning process and to the learner's goals.

To help the learner see the relevance of learning a particular skill or information, explain how the objectives of a current lesson relate to previous lessons. Provide a transition to the current lesson verbally and visually,

showing how a specific unit or lesson fits into the overall plan for accomplishing learning goals. The unit maps created during the planning phase can supply a road map for what has been learned and what will be learned. When this map is constructed and expanded with the learner (it can be posted on the wall or kept in a folder or notebook), it can be used to draw attention to connections in and between the information that has been learned. It can also be used to review and discuss progress.

Informative Instruction

Informative instruction involves making sure that the learner is informed about how the learning process works, what is expected during the instructional situation, and how he or she can improve learning and performance.

The learner may not have developed the self-monitoring and self-evaluation strategies to track his or her learning progress. Therefore, you should keep the learner informed of when, where, how, and under what conditions learning or performance will occur. You should cue critical points for goal setting, monitoring goal attainment, and gaining commitment throughout all stages of instruction.

Communicate to the learner each session's organization and expectations. Begin each instructional session by taking 2 to 3 minutes to construct a visual organizer with the learner. Reiterate current goals and subgoals, and ask questions, giving the learner an opportunity to put the information in his or her own words. You can avoid confusion and ambiguity if the learner knows what is expected and how to accomplish it.

The learner needs to understand if he or she is performing a skill correctly or incorrectly, particularly during the early stages of learning and practice. Feedback can help the learner better understand his or her skill performance; however, many adults with learning disabilities are sensitive to feedback because it often indicates failure. Therefore, stress that feedback does not always mean failure, rather it is like coaching.

Inform the learner about his or her performance as it is happening. Tell the learner what was done well and why, as well as what was done incorrectly, and why and how to improve it. You can prompt the learner to reflect on his or her performance and to give self-feedback for your comment. Good feedback does not have to wait until the learner has completed a task or asked for help and does not simply tell the learner how to perform the skill—good feedback challenges the adult to be reflective about his or her performance.

Explicit Instruction

Explicit instruction involves providing detailed explanations and models to the learner about how to approach, think about, perform, and evaluate learning and performance.

Adults with learning disabilities need a significantly greater amount of detail than other learners do. Therefore, you need to make each learning step apparent through detailed explanations. Learning of information cannot be left to chance; everything must be explained, and multiple models of correct performance must be provided. The learner needs to receive clear explanations, be shown how to link new information to previous knowledge, and be shown how to think about, use, and manipulate information.

The first step of explicit instruction is to create an advance organizer to foster an awareness of the overall topic, or big picture, of the information that the adult can expect to learn. The second step is to shift the focus to smaller parts, while always relating the smaller parts back to the bigger picture, as reflected through the advance organizer. The learner can benefit from a description of what he or she should do, as well as a model of how performance should "look."

As you model, describe your thinking and your performance. Good learners are conscious of both their thinking about their actions and the impact of their actions on tasks. Before asking the learner to perform a task, therefore, explain and demonstrate correct performance. It is unrealistic to expect the learner to independently "discover" correct performance. However, you can lead the learner through explicit guided discovery using scaffolded questioning.

Explicit instruction also ensures that the learner does not begin practicing a procedure incorrectly and then have to unlearn the procedure.

Finally, explicit instruction concludes with checks and reviews to ensure that the learner has mastered individual pieces of information as well as the bigger picture, and the relationships among these.

Direct Instruction

Direct instruction is characterized by high rates of teacher or tutor leadership and control during the initial stages of information acquisition, followed by careful monitoring of the learner's performance as he or she gradually assumes control of and masters the information.

You should provide direct, face-to-face instruction and guidance to ensure that the learner has acquired the correct information and is thinking about and using the information correctly. This type of step-by-step leadership should guide and show the learner how to effectively learn and perform.

The learner should avoid independent work until he or she thoroughly understands what will be practiced. However, you should carefully arrange practice activities to ensure appropriate levels of guided-to-independent practice and feedback. You should monitor the learner's progress frequently to ensure that the learner is not incorrectly practicing what has been taught. Although you assume the initial responsibility for guiding a learner's performance, you should gradually turn over the control to the learner as he or she progresses.

Scaffolded Instruction

Scaffolded instruction involves the frequent use of connected questions and collaboratively constructed explanations to create a context for learning based on the learner's prior knowledge. The learner's prior knowledge can be used as a foundation to which new information can be linked.

Scaffolded instruction ensures that what the learner already knows is used as a guide to determine the next step for instruction. Scaffolded instruction is direct and interactive teaching that provides guidance through questioning. Following questioning, you should prompt the learner to ask and answer questions about the task to gain information about how she or he is thinking about it. This interactive questioning creates a context that can be used to make instructional decisions about what and how to teach.

Your critical questions provide new information based on the learner's responses. You should ask additional questions to clarify, and then continue to interactively shape learning. To provide scaffolded instruction, however, you should have an expert understanding of the critical information and all its component parts that the adult is expected to learn and to weave into his or her background knowledge. Your questions and responses are carefully shaped by this expert knowledge.

Intensive Instruction

Intensive instruction involves helping learners to maintain a high degree of attention and response during instructional sessions that are scheduled as frequently as possible.

Instruction should occur frequently and demand a high degree of learner attention and response, as well as your evaluation and feedback. Literacy programs should offer instruction as often as possible, and instruction that is offered should fully engage learners' attention. Intensity also involves frequent exposure and opportunities for practice. Excessive drilling is rarely the answer; but frequent practice and application of a skill is essential for learners to master and generalize information. It is rarely enough for a learner who is practicing a basic skill in learning to read to have the opportunity to practice this skill only once or twice a week. Practicing something new once a week is like learning it over again every time.

Intensity during instruction is achieved by a progressive pace, frequent question/answer interactions, and frequent activities that require a physical response (for example, point, write, raise your hand, repeat). Intensity can be achieved through reflective or open-ended activities if the activities are focused on an outcome, engage interest, and maintain the learner's attention.

Process-Sensitive Instruction

Process-sensitive instruction involves reshaping the activities within the instructional sequence to take into consideration various cognitive barriers that might inhibit learning.

Activities and instructional sequences should be sensitive to the information-processing demands of the task and to the range of information-processing characteristics of adults. The broad sequence of teaching procedures should take into consideration a variety of information-processing demands, including acquiring, storing, and retrieving information, and demonstrating competence.

For example, instructional activities that enhance information processing include prompting metacognition, reducing memory load, modeling, prompting verbal elaboration and rehearsal, teaching strategies that show adults how to evaluate tasks, select and use needed skills, and checking accuracy. Additional examples are as follows:

Example 1. If the learner has difficulty acquiring information, he or she is likely to have difficulty distinguishing important from unimportant information or checking for understanding. These difficulties are likely to prevent the learner from fully profiting from observing, listening, or reading. To address this, you can cue important information, incorporate frequent checks for comprehension, questioning, and paraphrasing.

Example 2. If the learner has difficulty storing information, he or she is likely to have difficulty committing information to memory or recording information in notes. To address this, you can help learners build mnemonic devices or develop cue cards for remembering critical information.

Example 3. If the learner has difficulty retrieving information that has been acquired and stored, he or she is likely to have difficulty during instruction linking learned information to required tasks, knowing when to use specific skills and strategies, answering questions, or finding information in notes. To address this, you can

- teach the conditions for using information,
- help the learner identify or create links between tasks and known information,
- frequently review how tasks and known information relate,
- provide organizers that show context and relationships, and
- provide direct practice in applying information to a variety of tasks and situations.

Example 4. If the learner has difficulty demonstrating what has been learned, he or she is likely to have difficulty during instruction constructing sentences, paragraphs, editing, completing assignments, and taking tests. To address this, you can model and shape correct ways to demonstrate competence, provide alternate ways to express what has been learned, or provide task monitors to ensure assignment completion.

Accommodating Instruction

Accommodating instruction involves providing specific and general adaptations that are legally required to reduce or eliminate the impact of a learning disability on successful learning and performance.

Accommodations are legally required adaptations that reduce or eliminate the impact of information-processing difficulties on learning and the consequences of the difficulties on the adult's life. Specific instructional practices that characterize process-sensitive instruction may be judged a legal accommodation (refer to the section "Legal Issues Related to Adults with Learning Disabilities" in *Guidebook 1*).

Legally required accommodations are provided at each stage of learning. They are directly related to the nature of the disability and should be determined from the evaluator's report of the learner's diagnostic test

results. In addition to using specific, legally required accommodations for a learner based on results of the learner's diagnostic evaluation, you may find it helpful to routinely include general accommodations that reduce information-processing barriers at each stage of instruction. For example, it is helpful if the learner has an opportunity to process the same information in multiple ways—visually, auditorally, interactively, and physically. For the learner, this means that information is heard, visually displayed, discussed, and acted on through the completion of notes, tables, organizers, or other methods that engage the learner in actively thinking about the information.

Evaluated Instruction

Evaluated instruction involves adapting instruction based on an assessment of the learner's progress and his or her response to previous attempts at instruction.

Evaluation, either formal or informal, should begin the moment a goal is set. Because they are embedded in the instructional process, evaluation activities should provide information about what the adult is learning, how he or she is learning, and which instructional procedures need to be adapted or revisited. Sometimes instructional procedures simply need to be more thoroughly implemented or intensified. At the earlier stage of instruction, evaluation is as simple as regularly checking to be sure that desirable and realistic goals have been set. As instruction progresses to describing and modeling and to prompting practice and skill performance, evaluation should be embedded in all activities to determine if instructional procedures and sequences are working. The learner may not always be aware of difficulties he or she is having or of how to express concerns. Regular evaluation can determine whether the learner understands tasks and performance requirements. This information can then be used to adjust instruction.

Generalizable Instruction

Generalizable instruction involves using activities before, during, and after information has been mastered both to ensure continued application of the information and to increase the learner's success outside of the literacy setting.

Generalization refers to how well learners use information outside the literacy program to increase their success in life. Instruction for generalization is not something that is completed only after information has

been mastered. Rather, it is the ongoing organization of activities throughout the entire instructional sequence that forecasts and ensures thinking and practice related to the goal of generalization.

Before beginning instruction, you should link the learner's needs to literacy goals that you have collaboratively established with the learner. As instruction begins, provide examples of how the information that is being learned will be used in the learner's everyday life and propose new situations. The learner will benefit from seeing multiple models of the information used in different situations. Practice should move to real-life applications as soon as possible and should include opportunities that require the learner to adapt the information for use under different circumstances. After the learner has mastered the information, provide specific generalization activities that involve planning how information might be used, using information outside the literacy program under "safe" conditions, planning for long-term use of the information, and ongoing monitoring of how the information is being used and adapted for success.

Enduring Instruction

Enduring instruction means that program providers acknowledge and commit the time necessary to ensure that learners master the information and use it to increase their successes in life.

Instruction for adults with learning disabilities often needs to be provided over a long period of time. In fact, practitioners who are considered effective with adults with learning disabilities have been described as relentless. Because mastery of critical information will require more time for adults with learning disabilities than for other learners, you must plan for an extended instructional journey if mastery is to be attained. Even after an adult has learned a particular strategy or "chunk" of information, you may need to provide cumulative reviews to help him or her adapt and extend its use to new situations.

Systems and Program Change

A critical part of creating successful literacy programs is altering the way program leaders and practitioners think about change. Because all aspects of society can have an impact on the life of an adult, the mission for change is broad. Several interfacing systems, rather than one system, should be the target for needed change; *i.e.,* the social, educational, economic, judicial, and political support structures that affect individuals with learning disabilities.

To the practitioner, the notion of systemic change can be overwhelming. Therefore, the opportunity to create change must begin with those systems, or those aspects of an individual system, over which practitioners have direct control. Most certainly, practitioners have direct control over their own actions and their interactions with adults who have learning disabilities. From this perspective, personal growth through professional development is an important factor in systemic change. It is essential that practitioners commit to developing actions based on (1) understanding learning disabilities in adults, (2) valuing each learner, (3) creating partnerships with learners, and (4) creating a best-practices approach to assessment and instruction.

Practitioners are also in the position to influence the people with whom they work and to begin to shape the policies and procedures that define their programs. For this kind of program change to occur, dialogue among program staff is critical. Practitioners must use a shared knowledge base and work toward a shared vision. For this reason, professional

development opportunities must be designed to foster interaction among practitioners.

Gradually, practitioners can begin to move out of their own programs and begin the work of shaping other parts of the system that affect adults with learning disabilities. If all practitioners (whether they are working in a national agency or in a local literacy program) begin to work together to create change at the level at which they have control, then systemic change can occur.

The following assumptions about systems change can be used to guide program staff's thinking about improving services to adults with learning disabilities:

- Change is a process, not an event.
- Change is rooted in a shared vision of the need to change, and a clear understanding of the needs and goals of adults with learning disabilities.
- Change, and the goals for change, are defined at multiple levels within a system and are played out in each level; change is both a top–down and a bottom–up process.
- Work at change involves ensuring that people at different levels within the system understand their roles and responsibilities.
- Shared as well as unique actions are expected of those at each level.
- Commitment, leadership, communication, and compromise are required at all levels.
- Equal attention must be given to the processes of planning, implementing, and evaluating actions and outcomes.
- Success is not contingent on a single person, group, or political agenda.
- Research-based practice in learning disabilities, appropriately adapted and translated for use with adults, is used to guide the formulation of policy, procedures, and actions.
- High-quality conversations about improving the life of those with learning disabilities are consistent, persistent, and pervasive.

Creating a Shared Vision and Developing an Action Plan

To develop a literacy program that is appropriate to the needs of adults with learning disabilities, program leaders must engage their staff members and other stakeholders within the larger community of service providers to review the literacy services currently being offered. Together, they may identify components of the program which could be improved to be more responsive to the needs of persons with learning disabilities. As they engage in this process of self-examination and strategic planning, they will be well served by creating a vision centered around the following program features.

Integrate Services with All Literacy Services

Services for adults with learning disabilities should not be thought of as a separate set of policies, procedures, and practices to be used with a few adult learners. Rather, it is more productive to conceptualize services for adults with learning disabilities as an integral part of all services that are provided to all adults who enter literacy programs. Once this perspective has been adopted, then all services can be systematically modified to address the significant number of adults in literacy programs who may have learning disabilities.

Ensure that Services Reflect Best Practices

It is true that many practices suggested in *Bridges to Practice* are built around practices that are good for all learners who may be struggling with literacy. However, it is also true that best practices related to serving adults with learning disabilities are based on the premise that good practices are already in place in adult literacy programs. Therefore, when adults do not learn, even though usually effective practices are in place, then more structured, direct, and intensive instructional practices are needed. These practices should be implemented and blended with appropriate legal accommodations and instructional adaptations, as necessary.

Adult literacy services that are appropriate for adults with learning disabilities are characterized as follows:

- Accommodations are provided to ensure access to services that would otherwise be available if learning disabilities were not present.

- Accommodations are provided based on the determination of learning disabilities by a formal diagnostic evaluation performed by a psychologist or other qualified professional (e.g., clinician or diagnostician who is licensed to administer psychoeducational test batteries).
- Practitioners are involved in advocacy and creating linkages to community resources. These linkages (including helping the adult obtain testing for confirming or ruling out learning disabilities) should promote understanding and change. This process increases the chances of success for adults with learning disabilities.
- Assessment practices allow for intensive probes to identify performance patterns. These patterns can indicate that an adult is processing information (*i.e.*, acquiring, storing, retrieving, expressing, and performing) differently from other adults. In other words, just providing more practice, independent learning activities, and presentation that include little interaction, guidance, or feedback will not significantly enhance performance. (For further information on the assessment process, refer to *Guidebook 2: The Assessment Process.*)
- A carefully thought-out process for screening for learning disabilities is embedded in the overall assessment process. This process should involve a review of multiple information sources that eventually leads to a decision to discuss the possibility of learning disabilities and the potential advantages and disadvantages of seeking formal diagnostic testing by a qualified professional. (For further information on the assessment process, refer to *Guidebook 2: The Assessment Process*.)
- Staff are trained and have the resources to plan, select, and implement a variety of curriculum options, including self-advocacy. (For further information on the planning process, refer to *Guidebook 3: The Planning Process.*)
- Individual and group instruction incorporates research-based principles for teaching individuals with learning disabilities. (For further information on the teaching/learning process, refer to *Guidebook 4: The Teaching/Learning Process.*)

Initiating Change

The following five steps are critical to initiating the change process:

1. Bring all stakeholders together to create a shared vision and develop an action plan.
2. Enlist administrative support.
3. Provide meaningful and ongoing professional development opportunities.
4. Identify resources.
5. Continuously monitor and improve the change process.

These five steps are described in greater detail below.

Step 1: Bring the Stakeholders Together

There are many specialized programs available to persons with disabilities in various public and private community organizations. Unfortunately, the potential impact of these programs is often weakened because they do not connect with other local programs to create a more comprehensive network of services. Adults and literacy programs need to enlist the assistance of a broad base of community organizations for two major reasons:

- The more that groups are enlisted as partners in the change and development process, the more likely systemic change will occur. Literacy providers are in a unique position because they can bring a variety of these stakeholder groups together to create a shared vision and to develop an action plan to bring about change.
- The resources and costs needed to provide appropriate services can be significant. Literacy practitioners are in a position to understand the needs of adults with learning disabilities and to locate community resources that are free or available at a reasonable cost. In addition, literacy practitioners can work with other community organizations to arrange collaborative partnerships that can create access to resources and advocate for changes in policies and procedures that could improve access for adult learners.

By developing community linkages, literacy programs may be able to

- help adults who desire testing to confirm learning disabilities to gain access to formal and professional diagnostic testing administered by a psychologist;
- obtain training opportunities needed for family, community, and employment success that are beyond the mission of the literacy program;
- obtain social and emotional support for adults to discuss issues involving living with learning disabilities; and
- promote advocacy by assisting in securing civil rights protections and appropriate accommodations for learners.

The following state and community services may assist adults with learning disabilities. Contact information for many of these organizations can be found in the Resources for Learning section in this guidebook.

CHILDREN AND ADULTS WITH ATTENTION DEFICIT DISORDERS (CHADD)

This group can provide information, support, and advocacy for persons with learning disabilities who have been diagnosed with attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD). They may also be able to connect adults with learning disabilities specialists and, in some cases, to arrange for lower-cost diagnostic testing or other services.

DEPARTMENT OF VOCATIONAL REHABILITATION OR DEPARTMENT OF REHABILITATIVE SERVICES

This is a federally supported, state-run agency that provides employment services to adults with disabilities. Policies related to testing and services vary from state to state. Services provided may include covering costs for literacy training, diagnostic testing, job training, or college courses. Diagnostic testing for learning disabilities to determine eligibility for support can be provided as part of entrance into programs.

DISABILITY COUNCILS

Many communities have representatives from a variety of community groups working together to coordinate policies and services and to advocate for people with disabilities.

EMPLOYER-SPONSORED JOB-TRAINING PROGRAMS

Many businesses sponsor literacy or job training. Their personnel departments may have individuals who coordinate or deliver these training activities.

HOSPITALS

Some large hospitals collaborate with community agencies to provide diagnostic testing for learning disabilities. Some literacy groups have cultivated these relationships because hospitals regularly deal with Medicaid regulations and procedures, which allow for payment for diagnostic testing. While most literacy programs do not have the infrastructure to access these funds, large hospitals do.

INDEPENDENT LIVING PROGRAMS

These programs may pay for some literacy services.

INTERNATIONAL DYSLEXIA ASSOCIATION

This group, formerly known as the Orton Dyslexia Society, can provide information, support, and advocacy for persons with learning disabilities. They may be able to connect adults with learning disabilities specialists and, in some cases, to arrange for lower-cost diagnostic testing or other services.

LEARNING DISABILITIES ASSOCIATION (LDA)

This group can provide information, support, and advocacy for persons who have or may have learning disabilities. There are LDA chapters in most states. They may be able to connect adults with learning disabilities specialists and, in some cases, to arrange for lower-cost diagnostic testing or other services.

MEDICAID/MEDICAL INSURANCE PROGRAMS

Some medical programs may pay for literacy services and diagnostic testing. Early Periodic Screening Diagnosis and Treatment (EPSDT) services may be available. The Health Care Finance Administration (HCFA) is responsible for Medicaid and has policies for covering the expenses of some diagnostic testing.

POSTSECONDARY EDUCATIONAL INSTITUTIONS

Most universities, colleges, and community colleges have testing and other services for persons with disabilities or suspected disabilities. Faculty may also be willing to collaborate in providing free or reduced-cost testing and other services as part of psychologist and teacher training efforts. For example, groups of programs can arrange to have graduate students perform testing under the supervision of a psychologist.

PRIVATE PSYCHOLOGISTS

The yellow pages include the names of certified psychologists who can provide formal diagnostic testing and may arrange follow-up services.

Some psychologists work with community agencies, and a group of local organizations might be able to contract for testing at a reduced cost.

PRIVATE SCHOOLS

Some private schools offer services and diagnostic testing for adults with learning disabilities, and may be willing to make flexible payment arrangements for adults with limited resources.

PROGRAMS SUPPORTING WELFARE REFORM

Many individuals on welfare may have learning disabilities. A number of agencies addressing welfare are supportive of efforts to identify adults with learning disabilities and find appropriate interventions to help them move to self-sufficiency.

PUBLIC SCHOOLS

Special education services provided through IDEA may be available for young adults under 22 without high school diplomas. These services can include diagnostic testing.

SUPPLEMENTAL SECURITY INCOME (SSI)

This program can provide direct income to persons with disabilities. Diagnostic testing to determine eligibility for support is also provided.

SUPPORTED EMPLOYMENT SERVICES

This program can provide for job training and job coaches.

VOCATIONAL EDUCATION AND TRAINING PROGRAMS

Vocational programs have education and training services that can meet the needs of adults with learning disabilities. These programs may need information about accommodations and how to provide better instruction in mixed-ability classrooms.

Programs that provide testing may have a psychologist test adults with learning difficulties. However, the psychologist may determine after testing that the difficulties are not severe enough to quality for the learning disabilities diagnosis. For others, the severity will be sufficient to qualify for this diagnosis. The psychologist's report will provide documentation that enables the adult to become qualified for the rights to protections as a person with a disability, including the right to accommodations in testing and in the workplace. More information on issues related to obtaining formal diagnostic testing is included in *Guidebook 2: The Assessment Process*.

Step 2: Enlist Administrative Support

Literacy teachers and tutors cannot effect broad-sweeping change by themselves. They may be able to make some changes in the way they work with adults with learning disabilities, but they need the support of program administrators, from the chief executive officer level to the literacy program leaders, to make the change process successful.

Program leaders can bring together the various community stakeholders, encourage the creation of a shared vision, and work toward identifying agencies to which learners can be referred for issues such as diagnosis of learning disabilities, vision and hearing screening, employment support, and health care. Program leaders can also ensure that literacy program staff have the opportunity to meet frequently and engage in meaningful dialogue about the change process and their progress toward their stated goals.

Step 3: Provide Meaningful and Ongoing Professional Development Opportunities

Literacy programs should have a vision about the nature of, practices for addressing, and legal issues associated with learning disabilities. This vision is most effective when shared by program staff and a variety of community organizations, and requires an investment in high-quality professional development opportunities focused on improving services for adults with learning disabilities.

Staff should select program and professional development activities based on a long-term commitment to increase the success of adults with learning disabilities. Most practices require an initial investment of three to five years to introduce a practice to the staff in a literacy program. After a practice is in place, continued success of the practice requires an ongoing investment of resources and staff time to update and review the practice and to ensure that it stays effective.

Step 4: Identify Resources

To effect change, literacy program leaders and staff need to work with other stakeholders to identify resources which will allow for increased contact time with learners, frequent high-quality professional development opportunities, specialized program staff (lead teachers or learning disabilities specialists), and other elements which will improve the quality of services provided to adults with learning disabilities.

Step 5: Continuously Monitor and Improve the Change Process

After developing an action plan, literacy program staff need to continuously monitor their progress toward goals and adjust the plan, as appropriate. To assess the process effectively, program staff should consider the following questions:

- What are the criteria for evaluating the change process? (For example, how will success be measured?)
- Who will provide the evaluation input?
- Who will review the results?
- How will the results be used?
- Who will monitor the desired outcomes?
- How will new ideas and needs be incorporated?
- How will the need for continuous improvement be communicated and encouraged?

Indicators of High-Quality Services

Literacy program staff can evaluate their progress toward developing high-quality programs by ensuring that the programs have the following characteristics on this checklist:

The integrity of curriculum options and materials are maintained during instructional activities.

- ❒ Written policies, procedures, and practices ensure that instruction is built around well-defined curriculum options and specific curriculum areas.
- ❒ Written policies, procedures, and practices ensure that materials are appropriately used and or modified for use with learners.
- ❒ Written policies, procedures, and practices ensure that the content of curriculum options and materials are analyzed and translated into explicit instructional activities.

An instructional environment addresses the needs of adults with learning disabilities while promoting learner independence.

- ❒ Written policies, procedures, and practices ensure that the environment supports learning while supporting independence.
- ❒ Written policies, procedures, and practices ensure that adaptations and accommodations are used effectively during instructional sessions.

Principles of LD-appropriate instruction drive instructional interactions with adults with learning disabilities.

- ❒ Written policies, procedures, and practices ensure that principles of LD-appropriate instruction are embedded in teaching activities.
- ❒ Written policies, procedures, and practices ensure that practitioners alter instruction to increase the success of teaching practices.

Models of LD-appropriate instruction are used to guide and evaluate teaching activities.

- ❒ Written policies, procedures, and practices ensure that practitioners understand and can incorporate components of strategic instruction in their instructional activities.
- ❒ Written policies, procedures, and practices ensure that practitioners understand and can incorporate components of direct instruction in their instructional activities.
- ❒ Written policies, procedures, and practices ensure tutoring sessions are collaborative and revolve around models and principles of LD-appropriate instruction.

Instructional sessions are structured around the goals of teaching, reviewing, and planning.

- ❒ Written policies, procedures, and practices ensure that teaching sessions are well planned, implemented, and evaluated.
- ❒ Written policies, procedures, and practices ensure that instructional sessions regularly review progress and provide feedback on specific and overall progress made towards reaching goals.
- ❒ Written policies, procedures, and practices ensure that action plans are reviewed and revised at regular intervals.

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APPENDIX A

Characteristics of the Strategies Instructional Model

During strategic instruction, the instructor's task is to facilitate his or her student's learning in the best way possible. To be effective and efficient in their learning, students of any age or learning background need to know "how" they learn. Those with learning disabilities especially need to be aware of the techniques or "strategies" that help their learning.

Much research regarding strategic instruction has been completed by the University of Kansas Institute for Research in Learning Disabilities (KU-IRLD) and has lead to the development of a comprehensive program of strategies. Pressley (1995) states that the research regarding strategic instruction done at the University of Kansas is scientifically credible and has had a significant impact on instruction for individuals with LD across the nation. Researchers at the KU-IRLD and others across the country have done numerous studies regarding the benefits of strategic teaching for LD and non-LD students of various ages.

The greatest contribution made by researchers in the area of strategic instruction has been the development of specific instructional procedures for teaching strategies intensively and systematically. These instructional procedures have been used repeatedly and successfully in more than 50 studies to teach strategies to individuals with LD to meet everyday demands. In addition, these procedures have been replicated by a variety of researchers and have been applied to instruction in a variety of academic, social, and advocacy skills and strategies.

The use of strategic instruction has been researched in various settings with the following results:

- Fourteen of these studies were conducted in special education/ resource room settings. Students were able to successfully apply the strategies they learned, not only to their special education courses, but in regular classroom situations well into the next year.
- Studies have also been conducted in secondary classrooms where students with LD were mainstreamed. In one study, the students with LD mastered the strategies and maintained or exceeded their posttest scores well after the completion of the study.
- Studies on strategic instruction have also been done with elementary-aged students. All students in these studies mastered the strategies quickly, experienced success, and maintained the use of the strategies after the studies had been completed.
- College students in composition classes at Humber's College were taught strategies with positive results. The test scores of students that used the writing strategies increased dramatically from pre- to post-testing. These students' scores were higher than the control group of students that were not exposed to strategic instruction. Furthermore, the retention of the strategically taught students was 10% higher than the control group.

Although strategic instruction is not the only way to structure instruction for adults with LD, it represents the most validated set of instructional procedures currently available to adult literacy programs for structuring instruction with the greatest likelihood of success. In addition, any of the procedures involved in teaching adolescents may need to be modified for adults. However, eventually these procedures and modifications need to be scrutinized through a research lens to better define best practice for serving adults with LD.

Research has shown that learners benefit from strategic instruction that is implemented in a systematic manner in many ways (references are at the end of this guidebook).

Learners who experience a dramatic increase in comprehension

- have an increased sense of control over their own learning;
- gain a more positive educational outlook, leading to improved achievement;

- learn to more easily approach and complete tasks successfully;
- receive more consistent exposure and instruction on "how to learn," thus becoming empowered for self-success ;
- experience an overall increase in academic success in all areas;
- experience increased independence in performing academic tasks;
- are better prepared for task completion within the classroom (as well as in the future when they participate in continued guided practice with strategies);
- experience a significantly reduced number of trials to mastery, along with a reduction in student errors;
- experience increased test scores; and
- identify more goals and communicate them more effectively and openly.

Successful practitioners use systematic and effective teaching practices for all learners. Their decisions about teaching help their students learn what is most important in an efficient and effective way. It is particularly important that such teaching practices be used for adults with diagnosed or suspected learning disabilities.

This section describes different types of lessons that will help you move adults through specific instructional levels to ensure learning of targeted skills and strategies. The levels begin with instructional activities that focus on obtaining learner interest, progress to lessons related to presenting and ensuring acquisition of information, and end with lessons on how to support adults in their application and generalization of skills and strategies.

The levels of instruction described on the following pages provide guidelines on how to structure strategic instruction. The levels of instruction focus on providing structured teaching activities leading to the learner's mastery of skills or information. These levels are appropriate for teaching skills and strategies. The levels of instruction are:

Level 1: Commitment

Level 2: Shape or Describe

Level 3: Model

Level 4: Verbal Practice

Level 5: Supported Practice and Feedback

Level 6: Independent Practice and Feedback

Level 7: Generalization

Each of the seven levels of instruction require the practitioner to

CUE the adult about the level of instruction,

DO the activities and procedures with the adult, and

REVIEW learning at the end of each level.

Specific activities to be carried out at each level of instruction are provided on the following pages. The listed activities automatically incorporate the **CUE-DO-REVIEW** sequence. However, a reminder to **CUE-DO-REVIEW** is provided at the start of each level to emphasize the importance of informing and involving the adult in the instructional process.

Each instructional level may require one or more instructional sessions to complete. For short skills or strategies, plan to move through many of the levels in one session. In general, the practice and generalization levels will require several sessions.

Each instructional level is presented in the form of a checklist to be used for individual instruction but can easily be modified for group instruction.

Instructional Level 1: Commitment

Remember to CUE-DO-REVIEW

___ 1. **Introduce or review where the learner is in achieving established goals.** Review the learner's status in learning the critical questions constructed for program goals, the unit, or the lesson and content maps. Use progress charts that show the learner's progress towards goals.

___ 2. **Define or clarify the current area of learning.** Ask the learner to describe the previous session and what was accomplished.

___ 3. **Discuss with the learner his or her satisfaction with progress.** Ask the learner which areas of instruction and learning could be improved. List the learner's concerns on a separate sheet of paper for reference.

___ 4. **Share plans for learning.** Explain your plans for the session. Specify the critical questions that will be answered in this lesson and provide an overview of the content using a graphic lesson organizer. Address the learner's concerns by jointly modifying the plans.

___ 5. **Discuss levels of instruction.** Explain the levels of instruction that will be used to teach the skills or strategies.

___ 6. **Generate rationales.** Ask the learner to describe how the information to be presented relates to her/her goals. Discuss real-life applications of the information.

___ 7. **Obtain commitment.** Ask the learner whether he or she agrees with the instructional plan. If the learner does not think this is the best plan, discuss alternatives and alter the plan accordingly. You and the learner may want to sign the plan to indicate commitments to it.

Instructional Level 2: Shape or Describe

Remember to CUE-DO-REVIEW

An adult with learning disabilities may not have a clear understanding of how to perform a skill or strategy even after receiving directions. If this is the case, the learner will likely benefit from (a) understanding how he or she is currently performing a skill or strategy; and (b) understanding how he or she might modify or replace his or her current approach to a task.

Shaping

When the learner already possesses certain skills but is not using them efficiently, you may want to build on these skills. Additional steps may need to be incorporated in a strategy the learner is already using. Building on what the learner already knows is called shaping. Using the techniques of shaping, help the learner become more aware of what he or she is doing correctly. Further application of this level of instruction will help the learner shape new skills into fluency or into a more efficient strategy.

Describing

When the learner has weak skills or strategies, you may choose to focus instruction on presenting a new set of skills or strategies. This requires a careful description of the new skill or strategy and the steps that should be used to attack tasks.

___ 1. **Explain the shape/describe the level of instruction.** Tell the learner that this level of instruction focuses on explaining the new skill or strategy.

___ 2. **Review current performance.** Describe to the learner how he or she is currently performing in the targeted area.

___ 3. **Decide to shape or describe.** With the learner, decide whether his or her current performance can be shaped into a stronger skill or more efficient strategy **or** whether an alternative strategy or skill needs to be described.

___4. **Shape or describe the skill or strategy.** Thoroughly explain the skill or strategy. Explain both the purpose of the skill or strategy and what proper performance should look and "sound" like (model this aloud, as you think it to yourself).

___5. **Describe the steps for applying the skill or strategy.**

- ➤ List the steps involved in applying the skill or strategy.
- ➤ Either provide an information sheet listing the strategy steps or ask the learner to take notes as you describe each step.
- ➤ Describe what the learner must do to accomplish each step.
- ➤ Explain what the learner should think about during each step and how to decide when to go on to the next step.
- ➤ Explain each step thoroughly and provide examples.
- ➤ Demonstrate how to apply each step.

___ 6. **Compare to previous approach.** Ask the learner to compare the use of the new approach to performing the task with her or his old approach.

___ 7. **Check understanding.** Ask the learner to describe the new skill or strategy and how it should be applied. (Additional shaping or descriptions of the skill or strategy should be provided if the learner cannot provide this information.)

___ 8. **Create a remembering system.** Supply or create a remembering system. If you use a mnemonic device, point out how each letter will help the learner remember the strategy and how the entire word (mnemonic) relates to the activity.

___ 9. **Prompt demonstration of self-instruction.** Ask the learner to show you how he or she would use the remembering system to recall the skill or strategy for use.

___10. **Set goals for the remaining levels of instruction.** Using a calendar, set goals to predict how long it will take to complete the remaining five levels of instruction.

Instructional Level 3: Model

Remember to CUE-DO-REVIEW

During the model level of instruction, the practitioner demonstrates out loud how to think about, perform, and use the skill or strategy that has been taught in Instructional Level 2: Shape or Describe.

___ 1. **Explain the model level of instruction.** Tell the learner that during the model level of instruction you will

- ➤ model the strategy (explain that the learner will be expected to model it after he or she has observed you),
- ➤ demonstrate each step of the strategy or how the skill is applied,
- ➤ "talk out loud" to show how you are making decisions about using the skill or strategy,
- ➤ provide the models at first, but make it clear that the learner will be expected to show you how to perform and "think out loud," and
- ➤ expect the learner to ask questions about the model that you provide so that he or she is prepared to model.

__ 2. **Review current performance.** Quickly review the information that has been presented about the skill or strategy. If an extended period of time has elapsed between instructional sessions, the review may need to be more extensive.

___ 3. **Model how to approach the task out loud.** Describe when to use the strategy by talking out loud (for demonstration) just as if you would be thinking to yourself, for example:

"Okay, my boss gave me two pamphlets to read and summarize. I need to find the main ideas and key points . . ."

Model self-instruction. Ask yourself about the mnemonic device or remembering system in order to recall the strategy steps. Write the strategy steps on a piece of paper to recall the steps.

"Okay, I want to use my summarizing strategy. The word that helps me remember the steps is_____. The first step is _____. During the first step I need to _____. Now, let me try step one _____."

- ➤ *Model how to perform the task.* Emphasize both the cognitive and physical aspects of the strategy.

"Okay, I'm skimming for the main ideas. Here it is. I'm going to write it down on my paper. I write it at the top of the page. Now let me look for details to support it."

- *Model self-monitoring.* Self-monitoring involves checking with yourself to see how the strategy is working; it also involves checking your progress toward completion of the task and if you are accurate and complete in your task.

  "Let's see, was that right _____? Oh, I forgot to _____. Good _____ . Now it makes sense."

- *Model problem solving.* Include problem solving if you find or suspect something is wrong.

  "When you sense something is wrong, ask yourself, "What should I do?" Analyze your work and think through the problem, providing yourself with alternative solutions. "Okay, if I do this, then _____ . Yes, I think I'll try _____."

- *Model self-evaluation and self-reinforcement out loud.* As individual strategy steps are completed, evaluate your own performance.

  "Did I do the task correctly? Does it make sense to me? Did I do the strategy right?"

  Then must provide yourself with encouragement when you're successful.

  "I did a great job! The strategy really helps me summarize!"

___ 4. Involve the learner in the modeling process. After you have modeled a strategy from start to finish, invite the learner to participate in modeling. At first, the learner's "think out loud" statements may need to be prompted. Gradually allow the learner to do more and more without your help. Tactics to involve the learner include:

- *Prompt the learner to think out loud.* Learners' verbalizations are often procedural in the beginning. The learner is not accustomed to talking through steps and will need to be prompted to express his or her thoughts. As the learner works through the task, ask questions like, "What's next?" "What should I do, now?" "What should I be asking myself?" and "What are you thinking?"

- *Monitor the learner's understanding of the strategy.* Check to see if the steps are clear to the learner and encourage responses that allow for critique or feedback.

- *Prompt the learner to do self-monitoring.* Teach the learner to immediately self-correct incorrect responses. Ask questions that lead the learner to correct responses, and explain answers. Let the learner know when he or she has misinterpreted the process, and praise the learner's efforts.
- *Ensure the learner's success.* As the learner performs the task, use prompts, questions, and cues to direct the learner to success.

___ 5. **Summarize modeling.** Tell the learner that he or she is just beginning to learn how to think about using the skill or strategy. Explain that you will provide additional models of how to apply and think about the skill or strategy during future practice sessions.

Instructional Level 4: Verbal Practice

Remember to CUE-DO-REVIEW

During verbal practice, the learner describes the skill or strategy and how to apply it in his or her own words. The learner is also expected to memorize the steps of the skill or strategy before other types of practice begin.

___ 1. **Explain this level of instruction.** Tell the learner that, during the verbal practice level of instruction, he or she will thoroughly describe the skill or strategy and how it should be used, as well as memorize the steps involved.

___ 2. **Prompt the learner to "paint the big picture."** Ask the learner to explain the purpose of the skill or strategy, what it is designed to accomplish, and the general process involved. One way to prompt this is to ask the learner to tell you how he or she would describe the skill or strategy to another adult. Initially, adults should look at notes, handouts, or organizers for help.

___3. **Ask the learner to explain each step of the strategy.** Learners need to explain the purpose of each strategy step and its importance in relation to the overall strategy. You may lead the learner through each step and prompt for details. Ask questions like, "Why would you do that?" and "What is involved in that step?"

___ 4. **Prompt the learner to explain the role of self-instruction.** The learner needs to understand and explain what self-instruction is and how it is used to monitor performance on each of the strategy's steps. Ask questions such as, "How do you use the remembering system to recall the skill?" and "Show me how you would self-instruct."

___ 5. **Encourage elaboration and modification.** Ask the learner to comment on the skill or strategy as he or she sees it working. Ask the learner if there are changes or adaptations that need to be made to the skill or strategy. If so, change the steps for applying the skill or strategy and incorporate the changes into the instructional plans.

___ 6. **Provide practice opportunities for additional explanations.** Require the learner to explain the entire strategy to you or to other learners until he or she can thoroughly explain the skill or strategy.

___ 7. **Decide if the learner is ready for guided rehearsal of the strategy.** If the learner can explain the strategy process and steps, and the role of self-instruction, he or she is ready to begin guided memorization of the skill or strategy.

Some learners may have difficulty performing verbal explanations. By providing them with the first part of a sentence, they may have an easier time finishing the rest.

For example, say, "The first step in the strategy is to _____." or "That means I need to think about _____." Then cue the learner to finish the sentence. If the learner cannot describe the skill or strategy with these prompts, provide more rehearsal of the steps.

___ 8. **Explain guided rehearsal.** Once the learner can thoroughly describe the skill or strategy, he or she must memorize each strategy step. Because memorizing is difficult for many learners, guided memorization is important. If the skill or strategy has been selected carefully, the application steps efficiently organized, and the remembering system well constructed, the guided memorization activities should go smoothly. Without committing the strategy to memory, it is likely that applying the skill or strategy will take more time, energy, and practice.

If the strategy has a mnemonic device, the learner must be able to spell the mnemonic, remember each letter, and know what to do.

Model how you expect learners to rehearse the strategy. Say, "The name of the strategy is _____. The first letter of the acronym stands for ___ and tells me to ___. The second letter stands for ___ and tells me to ___."

___ 9. **Guide the rehearsal.** Lead the learner through the rehearsal process. Start with frequent cues and prompts, helping the learner frequently by filling in missing information or telling the learner to look at his or her notes.

- Begin with prompts such as: "What is the first step?" "What is the second step?" and "What is the next step?" Increase the speed of the rehearsal slowly. Work for fluency and autonomy in recalling the steps for applying the skill or strategy.
- Verbal prompts may be provided initially to help the learner, but drop them gradually.

➤ Prompt the learner to use the remembering system and self-instruction to recall the steps for applying the skill or strategy.

___10. **Prompt private or peer rehearsal.** Once learners understand the rehearsal process, you may wish to arrange for them to work independently or with peers. Help the learner memorize by orally providing all but the last step of the strategy, which the learner may then provide. Then repeat, providing all but the last two steps and allowing the learner to provide those steps, and so on. In addition, prompting the strategy and the strategy steps may help. The goal is to work towards mastery in recalling how to apply the skill or strategy

___11. **Determine recall mastery.** Ask the learner to say each step of the strategy correctly and without hesitation. Ask the learner to name specific steps in the strategy at a steady pace. Each learner must be able to easily describe 100% of the steps of the strategy when asked.

Instructional Level 5: Supported Practice and Feedback

Remember to CUE-DO-REVIEW

Practice provides the learner with opportunities to develop automaticity in skill performance and ways to think about a new skill or knowledge and its application. Good practice consists of a balance between repetitious activities and varied applications that allow the learner to explore the different ways a skill can be applied. Good practice is intensive and extensive and is combined with informative feedback.

___ 1. **Discuss the supported practice and feedback level of instruction.** Explain that supported practice means that you will provide assistance in practicing and applying the skill or strategy. Point out that you will provide feedback about the learner's performance as well.

___ 2. **Prompt the learner to preview the practice session.** Ask the learner to describe the skill or strategy that is to be applied, review progress toward learning the skill or strategy, review feedback from previous practice sessions, and set goals for improving performance during this practice session.

___ 3. **Introduce the practice activity.** Describe the practice task. Initially, choose materials with which the skill or strategy is easily integrated. Explain why you have selected this type of practice activity. You may want to discuss the following aspects of this activity:

- Materials gradually will increase in difficulty.
- Frequent exposure to a new skill, strategy, or set of knowledge is critical to mastery.
- Practice of a skill or strategy needs to occur more than once a week; daily practice is best.
- Practice activities should be varied to prevent boredom and provide multiple ways for the adult to appreciate the skill or strategy.
- Practice opportunities rarely result in a mastery of a new skill after just one or two exposures.
- Practice in a skill workbook gives the learner the tools but not an apprenticeship at applying them; practice needs to be applied to real-life activities.

___ 4. **Ask the learner about support.** Ask the learner if he or she wants you to begin the practice activity so that he or she can see how to start. If the learner requests initial support, begin the practice activity and model "thinking out loud" and demonstrating how to do the task. Gradually fade the model and enlist the full participation of the learner.

___ 5. **Provide intermittent support.** Observe as the learner completes the task. Provide support as needed in the following ways:

- Provide verbal prompts if the learner forgets a step.
- If the learner begins to make an error, remind him or her to think about what he or she knows about applying the skill or strategy.
- Ask the learner to use self-instruction.
- Stop the learner at certain points and review work.
- Prompt the learner to check notes about the skill or strategy.
- Stop the learner if he or she is having difficulty, and model by thinking out loud.

___ 6. **Identify and teach new information.** As the learner practices, additional or alternative skills or strategies may be needed. Discuss this with the learner and decide whether to proceed without changes or to address the problem right away. If a change occurs, return to instructional level 1 and discuss the addition; then proceed through the levels of instruction again.

___ 7. **Provide informative feedback.** At various points during the practice session, provide feedback. At first, you should provide information. However, as the learner continues to progress, you should prompt him or her to evaluate work by eliciting comments. The feedback process should include the following steps:

- reviewing the learner's work
- pinpointing or eliciting 3 successes
- making or eliciting a summary of successes
- specifying one type of error
- reviewing the rule/concept
- modeling or prompting application

- ➤ eliciting paraphrases from the learner about what he or she will change
- ➤ prompting the learner to make a note to remember change
- ➤ reinforcing of the learner's efforts
- ➤ confirming that the learner can succeed

___ 8. **Review session and set goals.** At the end of each practice session, review progress and set goals. Decide if another session at this level of practice is required or whether the learner is ready for the next instructional level. If practice needs to continue, make a list of the goals that need to be reviewed at the beginning of the next practice session.

Instructional Level 6: Independent Practice and Feedback

Remember to CUE-DO-REVIEW

___1. **Discuss the independent practice level of instruction.** Explain that independent practice means that the learner will work independently or with other learners to practice the new skill or strategy. Point out that after the learner has had an opportunity to work without instructor assistance, feedback about performance will be provided.

___ 2. **Prompt the learner to preview the practice session.** Ask the learner to describe the skill or strategy that is to be applied, review progress toward learning the skill or strategy, review feedback from previous practice sessions, and set goals for improving performance during this practice session.

___ 3. **Introduce the practice activity.** Describe the practice task. Explain why you have selected this type of practice activity. Emphasize that even though this is an independent practice, the learner may still ask for assistance if he or she gets "stuck."

___ 4. **Monitor independent practice.** Even during independent practice, check to make sure that the learner is on the right track. The learner should be practicing correct rather than incorrect application of the skill or strategy. If the learner appears to be having significant difficulties, move back to providing instructional level 5.

___ 5. **Consider cooperative practice.** Ask the learner if he or she would like to practice on the skill or strategy with others. If so, arrange for cooperative practice. Cooperative practice can be counterproductive if it is not structured appropriately. Simply putting learners into a group to work may not help them reach goals. Instead, make individual group members responsible for specific parts of the group's task or make learners individually accountable.

The most widely used cooperative learning methods emphasize the following components:

- *Face-to-face interaction.* Learners work together in groups of four or five.
- *Positive dependence on group members.* Learners work together to achieve a group goal.

- *Individual accountability.* Learners show how they have individually learned new information and contributed to attaining the group goal.
- *Interpersonal and small-group social skills.* Learners are taught the social skills related to how to work together in small groups.

__ 6. **Provide informative feedback.** After the practice session has been completed, review the learner's work and provide feedback. At first, you should provide information. However, as the learner continues to progress, you should prompt him or her to evaluate work by eliciting comments from the learner. The feedback process should include the following steps:

- reviewing the learner's work
- pinpointing or eliciting 3 successes
- making or eliciting a summary of successes
- specifying one type of error
- reviewing the rule/concept
- modeling or prompting application
- eliciting paraphrases from the learner about what he or she will change
- prompting the learner to make a note to remember change
- reinforcing of the learner's efforts
- confirming that the learner can succeed

___ 7. **Review session and set goals.** At the end of the independent practice session, review progress and set goals. Decide if another session in this level of practice is required or whether the learner is ready for the next instructional level. If practice is to continue, make a list of the goals that need to be reviewed at the beginning of the next practice session.

Instructional Level 7: Generalization

Remember to CUE-DO-REVIEW

Using strategies or skills independently in new situations is not always easy. Learners need to be taught to transfer what they have learned in the literacy program to daily situations. Implementing strategies in other situations is called "generalization." If generalization does not occur, teaching a skill or strategy has not yet been successful.

___ 1. **Discuss the generalization level of instruction.** Explain the purpose of generalization activities, which is to use the skill naturally and fluently to solve problems and complete tasks in the real world.

___ 2. **Set generalization goals.** Set goals related to the time frame in which you and the learner expect generalization to occur and how you will know if generalization has occurred.

For example, "I will know that our work in accepting criticism has really paid off when I can use it to keep my cool for at least two months when coworkers and my friends tell me things that I have done wrong."

___ 3. **List places for generalization.** Ask the learner where the skill or strategy could be used in his or her life. List these situations and prioritize them in terms of importance.

___ 4. **Discuss barriers and solutions.** Discuss anticipated problems when using the skill or strategy and how to solve problems if and when they occur.

___ 5. **Plan for remembering.** For each setting, discuss how the learner will remember to use the new skill or strategy. Develop a plan and write it on a small card.

___ 6. **Plan implementation assignments.** Together with learners, provide assignments where learners must use the strategy on tasks at home and/or at work and report back to you at the next session.

___ 7. **Determine how to monitor implementation.** Create a chart to record progress on implementation of assignments.

___ 8. **Develop a time line.** Discuss goals and determine how often the learner will have the opportunity to use the skill or strategy at home or at work. This information will help you and the learner develop a time line for completion of the implementation assignments.

___ 9. **State expectations for success.** Tell the learner that you know that she or he will be successful.

When learners return to the literacy center after completion of their implementation assignments:

___10. **Discuss and chart their progress.** Discuss how the skill or strategy was used and how it worked. Ask the learner to explain how the strategy provided support in completing the task successfully. If possible, chart successful attempts to use the strategy or skill.

___11. **Prompt problem solving and adaptation.** Ask the learner to explain if he or she needs to adapt or change the strategy. Discuss problems in applying the strategy, and brainstorm solutions and possible adaptations.

___12. **Ask learners to share experiences with peers.** In adult education settings, learners can gain knowledge and insights from each other's experiences. Ask learners to share successes, problems, and how they overcame problems successfully.

APPENDIX B

The Role of Phonological Awareness in Learning to Read

Research has documented that phonological awareness is one of the most important factors in learning to read (Lyon and Alexander, 1996). But what is phonological awareness? Phonological awareness is most commonly defined as one's sensitivity to, or explicit awareness of, the phonological structure of words in one's language (the sound system of a language).

Deficits in phonological awareness are characterized by weaknesses in the ability to "hear" the individual sounds in words. An adult with weak phonological awareness might not be able to identify the final sound in a word like "clap," or to generate other words that start with the same first sound. In short, phonological awareness involves the ability to notice, think about, or manipulate, the individual sounds within words (Torgesen et al., in press).

The smallest unit of meaningful, or functional, sound in a language is called a phoneme. For example, the word *bat* has three phonemes, /b/, /a/, /t/. By changing the first phoneme, we can produce the word *hat*, /h/, /a/, /t/. Changing the second phoneme creates the word *but*, and changing the last phoneme creates the word *ban.* In essence, phonemes are the building blocks of all spoken and written language; words in a language are composed of strings of phonemes. We can create all the words in the English language through various combinations of just 44 phonemes.

Phonemic awareness is important because it supports learning how the words in our language are represented in print, and thus proves a more potent predictor of success in learning to reading than intelligence, listening comprehension, or reading readiness tests. Conversely, lack of phonemic awareness proves the most powerful determinant of failure in learning to read. Individuals with a reading disability have difficulties with this most basic step in the road to reading: breaking the written word into its component phonological units. In other words, these individuals do not easily learn how to relate the sounds of language to the alphabet letters which represent them (Lyon, 1995).

If a person can perform these tasks orally, he or she is ready for instruction in learning how to use letter-sounds to identify words. Actually, instruction in letter-sound correspondences (*i.e.*, the sounds that letters represent in words) should be provided simultaneously with instruction in phonemic awareness. As soon as your student knows the sounds of some consonants and vowels, you can begin to use letters in many of your phonemic awareness activities. For example, you might ask the student to show you the letter for the first sound in "cat." Or, you might ask him or her to blend the sounds represented by the letters m-a-n. Or, you could say, "If that says 'man', what letter could you use to make it say 'tan'?" The idea of these activities with letters is to show the student how the skill learned in the phonemic awareness activities can be used in reading and spelling. Once students can do these activities with letters, they have taken one of the most important first steps in learning to read.

Phonemic awareness develops naturally in some people. However, for many people, phonemic awareness must be directly taught (Moats, 1997). Any approach to teaching reading must incorporate what we now know about the key role of phonemic awareness; indeed, throughout the early stages of literacy acquisition, teachers and tutors must begin each lesson with the direct teaching of phonemic awareness. Because a lack of phonemic awareness appears to be a major obstacle to learning to read, individuals with a reading disability must be provided highly structured programs that directly teach application of phonologic rules to print (Foorman et al., in press). The most powerful interventions that have been identified for reading disabilities to date consist of a combination of explicit instruction in phonemic awareness, explicit instruction in sound-symbol relationships (phonics), and direct and integrated instruction in text reading and comprehension.

The Stages of Teaching Phonemic Awareness

There are several stages of teaching phonemic awareness. Many of the curricular materials based on the Orton-Gillingham approach to teaching reading employ these stages:

1. Recognizing and Supplying Rhymes

Does *cut* rhyme with gut?

Does *dog* rhyme with *mad*?

Say a word that rhymes with *strong*. (long, gong, song, wrong)

2. Phoneme Identity

What word begins with the same first sound as *cat*? *Dog* or *kite*?

As *flat*? *Fig* or *bat*? What word ends with the same sound as *man*? *Tin* or *mat*?

3. Phoneme Isolation

What's the first sound in *fan*? /f/

the last sound in *which*? /ch/

the middle sound in *his*? /i/

4. Phoneme Segmentation and Counting

Say the speech sounds (phonemes) you hear in *fan*. /f/ /a/ /n/

How many speech sounds (phonemes) are there in *fan*? (3)

5. Phoneme Blending

Blend these sounds together to make a word: /sh/ /u/ /t/ (shut)

6. Phoneme Deletion

Say: *fan* without the /f/ (an)

slit without the /l/ (sit)

string without the /st/ (ring)

pitch without the /p/ (itch)

7. Phoneme Substitution

Say fan. Now change the first sound in fan to /m/. (man)

Other initial phoneme substitution tasks can begin with

mop /t/;	cake /m/;	pet /g/;	deal /s/;	hope /r/
(top)	(make)	(get)	(seal)	(rope)

Advancement: initial phoneme(s) to final phoneme(s) to medial phoneme(s)

Say fan. Now change the last sound to /t/. (fat)

Say fan. Now change the middle sound to /i/ (fin)

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Critical Questions for Adult Literacy Programs

To develop an adult literacy program that is responsive to the needs of adults with learning disabilities, literacy program staff may find it helpful to use the following critical questions as a framework for discussing and planning services. Each of the five guidebooks will provide information that can be used to help practitioners answer these critical questions:

- What makes adult literacy services sensitive to the needs of adults with learning disabilities?
- What is the nature and impact of learning disabilities on adults?
- How does the law affect the quality of life of adults with learning disabilities?
- What linkages to other community agencies are critical for literacy programs to increase the success of adults with learning disabilities?
- How can literacy program staff ensure that systemic change will increase the success of adults with learning disabilities?
- How can literacy program staff ensure that assessment practices in adult literacy programs increase the success of adults with learning disabilities?
- How can the choice of curriculum and curriculum materials affect the success of adults with learning disabilities?
- How can instructional planning become more sensitive to the needs of adults with learning disabilities?
- How can literacy program staff ensure that instruction increases the success of adults with learning disabilities?
- How can literacy program staff ensure that accommodations and instructional adaptations are appropriately selected and used to increase the success of adults with learning disabilities?

GUIDEBOOK 1
Preparing to Serve Adults with Learning Disabilities

GUIDEBOOK 2
The Assessment Process

GUIDEBOOK 3
The Planning Process

GUIDEBOOK 4
The Teaching/Learning Process

GUIDEBOOK 5
Creating Professional Development Opportunities

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